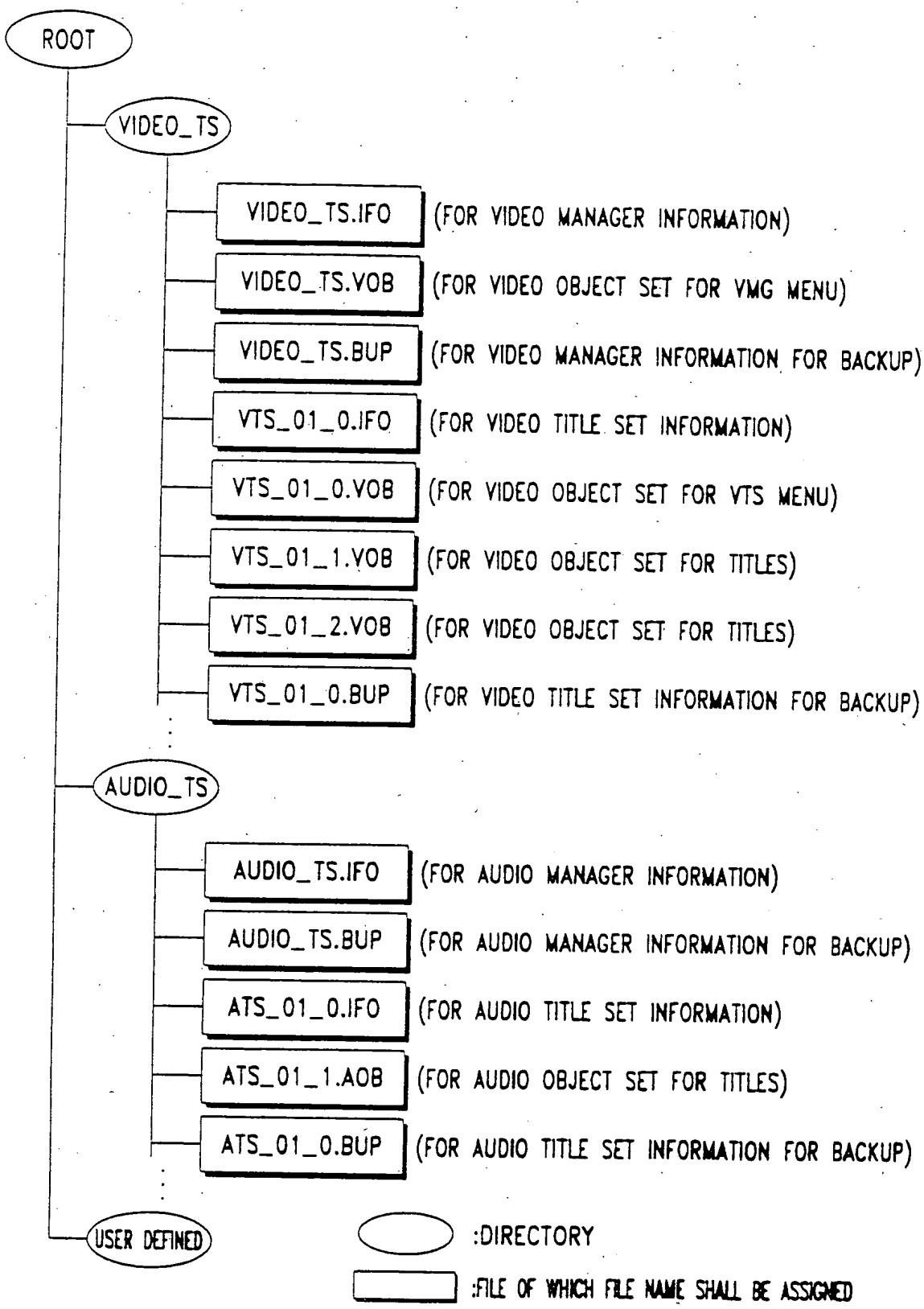
ROOT
VIDEO_TS
VIDEO_TS.IFO
(FOR VIDEO MANAGER INFORMATION)
VIDEO_TS.VOB
(FOR VIDEO OBJECT SET FOR VMG MENU)
VIDEO_TS.BUP
(FOR VIDEO MANAGER INFORMATION FOR BACKUP)
VTS_01_0.IFO
(FOR VIDEO TITLE SET INFORMATION)
VTS_01_0.VOB
(FOR VIDEO OBJECT SET FOR VTS MENU)
VTS_01_1.VOB
(FOR VIDEO OBJECT SET FOR TITLES)
VTS_01_2.VOB
(FOR VIDEO OBJECT SET FOR TITLES)
VTS_01_0.BUP
(FOR VIDEO TITLE SET INFORMATION FOR BACKUP)
AUDIO_TS
AUDIO_TS.IFO
(FOR AUDIO MANAGER INFORMATION)
AUDIO_TS.BUP
(FOR AUDIO MANAGER INFORMATION FOR BACKUP)
ATS_01_0.IFO
(FOR AUDIO TITLE SET INFORMATION)
ATS_01_1.AOB
(FOR AUDIO OBJECT SET FOR TITLES)
ATS_01_0.BUP
(FOR AUDIO TITLE SET INFORMATION FOR BACKUP)
USER DEFINED
:DIRECTORY
:FILE OF WHICH FILE NAME SHALL BE ASSIGNED

FIG. 1

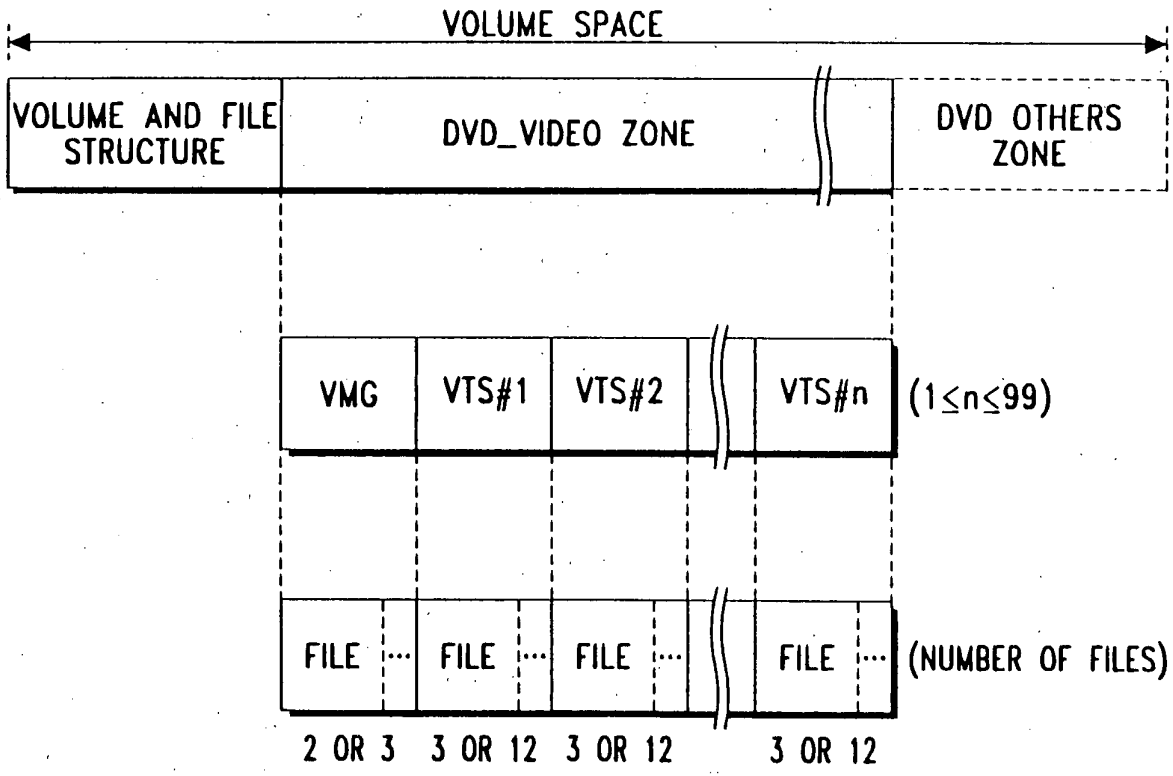
VOLUME SPACE
VOLUME AND FILE STRUCTURE
DVD_VIDEO ZONE
DVD OTHERS ZONE
VMG
VTS#1
VTS#2
VTS#n
(1≤n≤99)
FILE
FILE
FILE
FILE
(NUMBER OF FILES)
2 OR 3
3 OR 12
3 OR 12
3 OR 12

FIG. 2

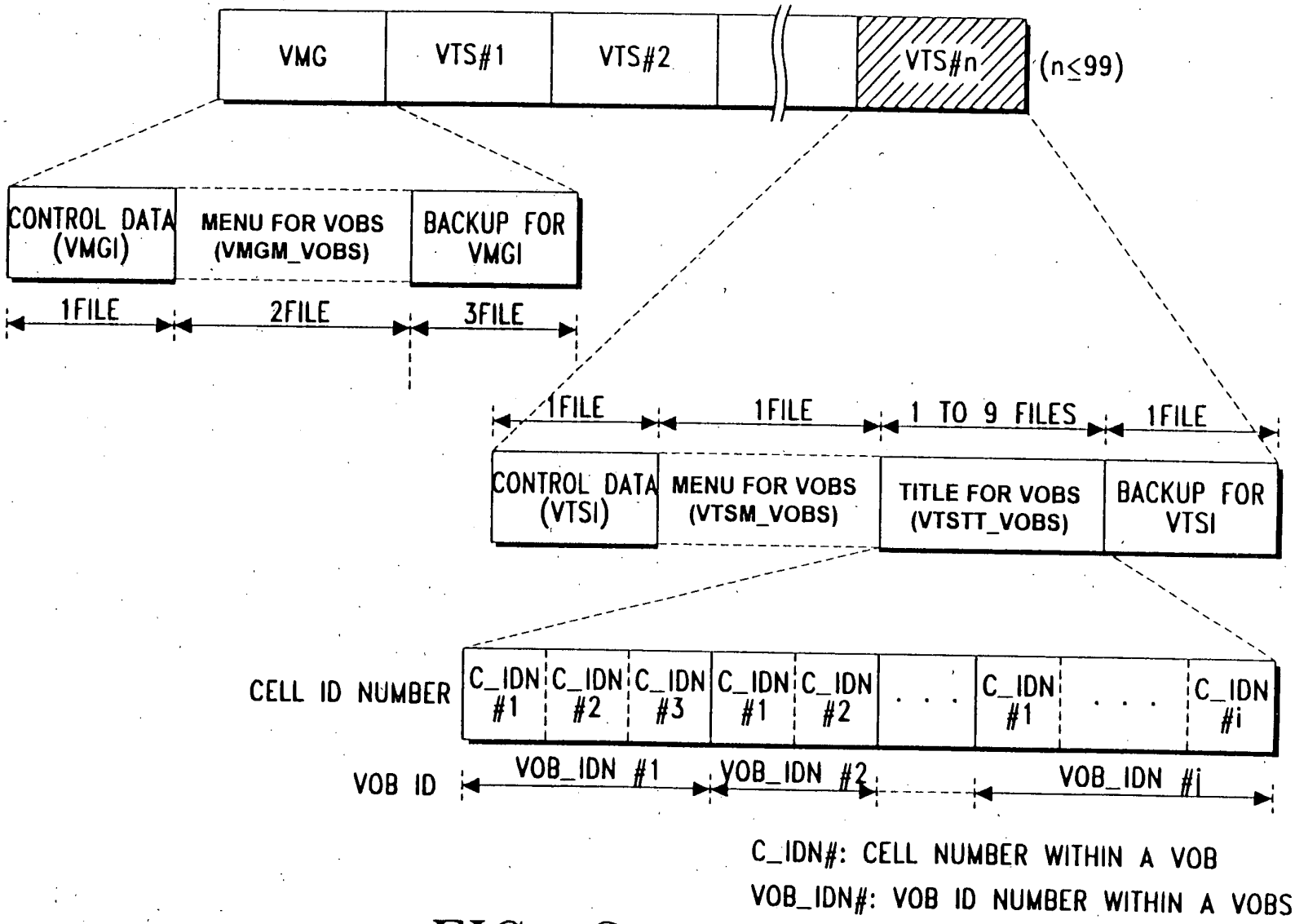
VMG
VTS#1
VTS#2
VTS#n
(n≤99)
CONTROL DATA (VMGI)
MENU FOR VOBS (VMGM_VOBS)
BACKUP FOR VMGI
1FILE
2FILE
3FILE
1FILE
1FILE
1 TO 9 FILES
1FILE
CONTROL DATA (VTSI)
MENU FOR VOBS (VTSM_VOBS)
TITLE FOR VOBS (VTSTT_VOBS)
BACKUP FOR VTSI
CELL ID NUMBER
C_IDN #1
C_IDN #2
C_IDN #3
C_IDN #1
C_IDN #2
C_IDN #1
C_IDN #i
VOB ID
VOB_IDN #1
VOB_IDN #2
VOB_IDN #j
C_IDN#: CELL NUMBER WITHIN A VOB
VOB_IDN#: VOB ID NUMBER WITHIN A VOBS

FIG. 3

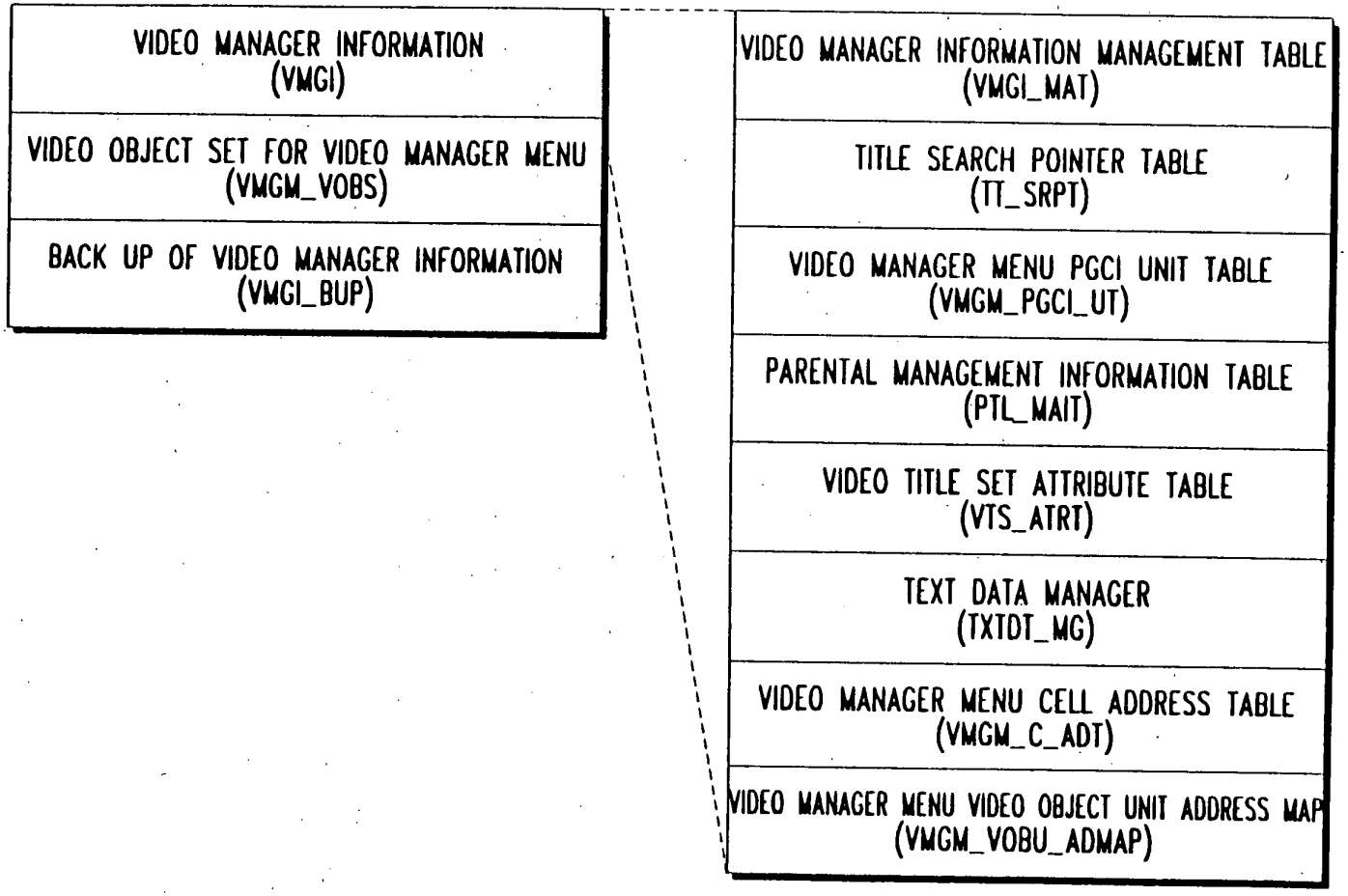
VIDEO MANAGER INFORMATION
(VMGI)
VIDEO OBJECT SET FOR VIDEO MANAGER MENU
(VMGM_VOBS)
BACK UP OF VIDEO MANAGER INFORMATION
(VMGI_BUP)
VIDEO MANAGER INFORMATION MANAGEMENT TABLE
(VMGI_MAT)
TITLE SEARCH POINTER TABLE
(TT_SRPT)
VIDEO MANAGER MENU PGCI UNIT TABLE
(VMGM_PGCI_UT)
PARENTAL MANAGEMENT INFORMATION TABLE
(PTL_MAIT)
VIDEO TITLE SET ATTRIBUTE TABLE
(VTS_ATRT)
TEXT DATA MANAGER
(TXTDT_MG)
VIDEO MANAGER MENU CELL ADDRESS TABLE
(VMGM_C_ADT)
VIDEO MANAGER MENU VIDEO OBJECT UNIT ADDRESS MAP
(VMGM_VOBU_ADMAP)

FIG. 4

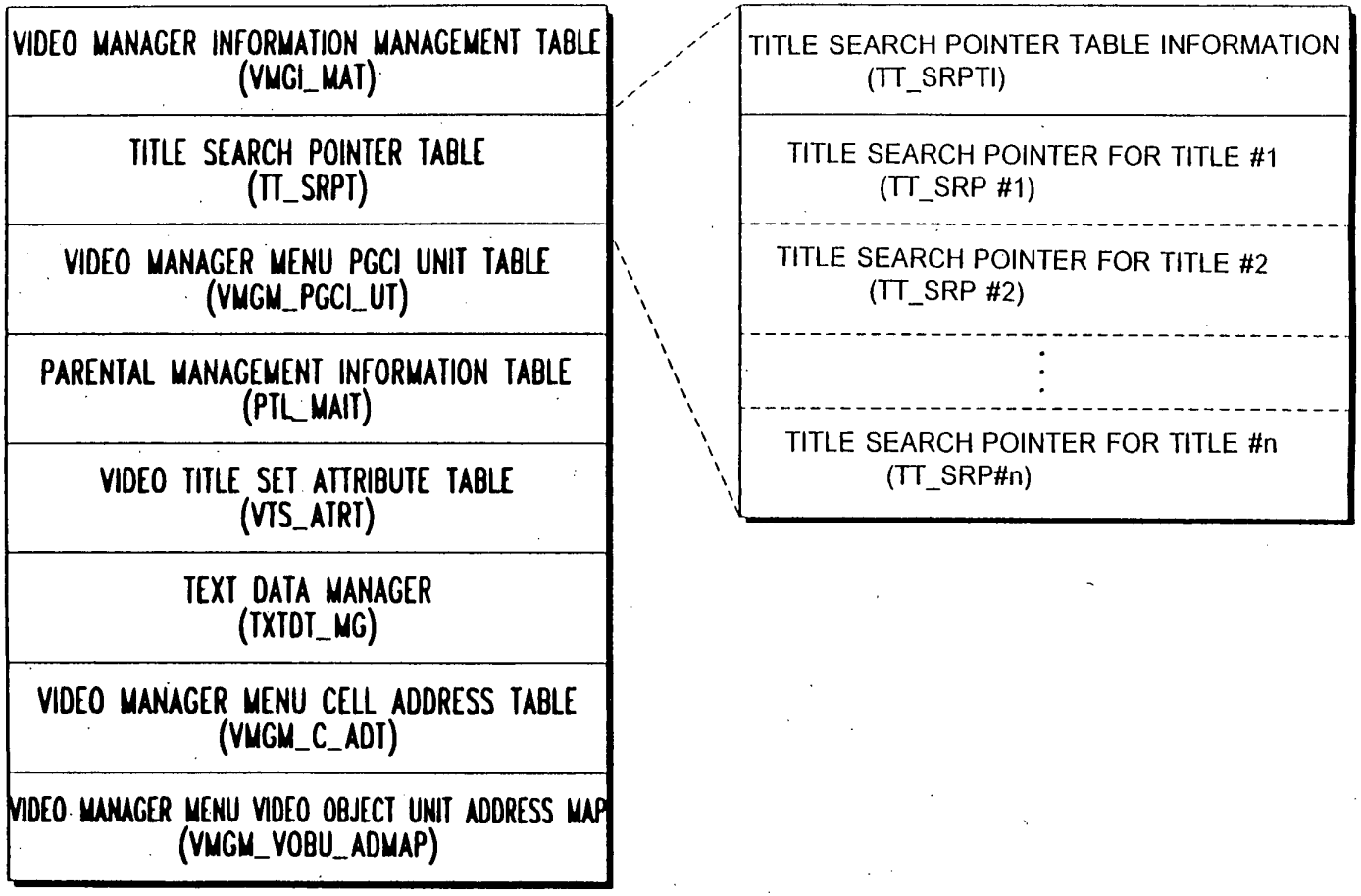
VIDEO MANAGER INFORMATION MANAGEMENT TABLE
(VMGI_MAT)
TITLE SEARCH POINTER TABLE
(TT_SRPT)
VIDEO MANAGER MENU PGCI UNIT TABLE
(VMGM_PGCI_UT)
PARENTAL MANAGEMENT INFORMATION TABLE
(PTL_MAIT)
VIDEO TITLE SET ATTRIBUTE TABLE
(VTS_ATRT)
TEXT DATA MANAGER
(TXTDT_MG)
VIDEO MANAGER MENU CELL ADDRESS TABLE
(VMGM_C_ADT)
VIDEO MANAGER MENU VIDEO OBJECT UNIT ADDRESS MAP
(VMGM_VOBU_ADMAP)
TITLE SEARCH POINTER TABLE INFORMATION
(TT_SRPTI)
TITLE SEARCH POINTER FOR TITLE #1
(TT_SRP #1)
TITLE SEARCH POINTER FOR TITLE #2
(TT_SRP #2)
TITLE SEARCH POINTER FOR TITLE #n
(TT_SRP#n)

FIG. 5

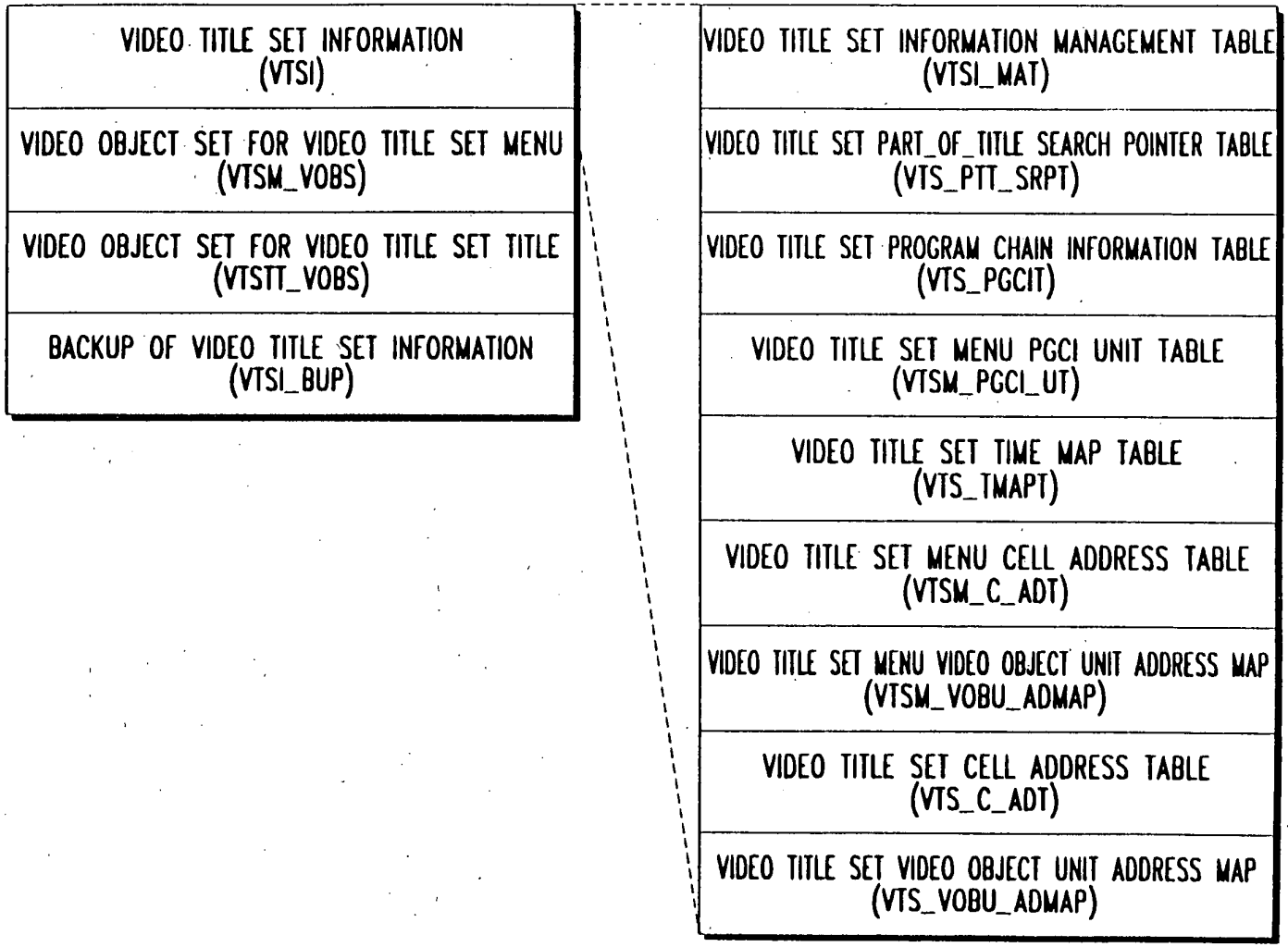
VIDEO TITLE SET INFORMATION (VTSI)
VIDEO OBJECT SET FOR VIDEO TITLE SET MENU (VTSM_VOBS)
VIDEO OBJECT SET FOR VIDEO TITLE SET TITLE (VTSTT_VOBS)
BACKUP OF VIDEO TITLE SET INFORMATION (VTSI_BUP)
VIDEO TITLE SET INFORMATION MANAGEMENT TABLE (VTSI_MAT)
VIDEO TITLE SET PART_OF_TITLE SEARCH POINTER TABLE (VTS_PTT_SRPT)
VIDEO TITLE SET PROGRAM CHAIN INFORMATION TABLE (VTS_PGCIT)
VIDEO TITLE SET MENU PGCI UNIT TABLE (VTSM_PGCI_UT)
VIDEO TITLE SET TIME MAP TABLE (VTS_TMAPT)
VIDEO TITLE SET MENU CELL ADDRESS TABLE (VTSM_C_ADT)
VIDEO TITLE SET MENU VIDEO OBJECT UNIT ADDRESS MAP (VTSM_VOBU_ADMAP)
VIDEO TITLE SET CELL ADDRESS TABLE (VTS_C_ADT)
VIDEO TITLE SET VIDEO OBJECT UNIT ADDRESS MAP (VTS_VOBU_ADMAP)

FIG. 6

VTSI_MAT

RBP		CONTENTS	NUMBER OF BYTES
0 TO 11	VTS_ID	VTS IDENTIFIER	12BYTES
12 TO 15	VTS_EA	END ADDRESS OF VTS	4BYTES
16 TO 27	RESERVED	RESERVED	12BYTES
28 TO 31	VTSI_EA	END ADDRESS OF VTSI	4BYTES
32 TO 33	VERN	VERSION NUMBER OF DVD VIDEO SPECIFICATION	2BYTES
34 TO 37	VTS_CAT	VTS CATEGORY	90BYTES
38 TO 127	RESERVED	RESERVED	4BYTES
128 TO 131	VTSI_MAT_EA	END ADDRESS OF VTSI_MAT	60BYTES
132 TO 191	RESERVED	RESERVED	4BYTES
192 TO 195	VTSM_VOBS_SA	START ADDRESS OF VTSM_VOBS	4BYTES
196 TO 199	VTSTT_VOBS_SA	START ADDRESS OF VTSTT_VOBS	4BYTES
200 TO 203	VTS_PTT_SRPT_SA	START ADDRESS OF VTS_PTT_SRPT	4BYTES
204 TO 207	VTS_PGCIT_SA	START ADDRESS OF VTS_PGCIT	4BYTES
208 TO 211	VTSM_PGCI_UT_SA	START ADDRESS OF VTSM_PGCI_UT	4BYTES
212 TO 215	VTS_TMAPT_SA	START ADDRESS OF VTS_TMAPT	4BYTES
216 TO 219	VTSM_C_ADT_SA	START ADDRESS OF VTSM_C_ADT	4BYTES
220 TO 223	VTSM_VOBU_ADMAP_SA	START ADDRESS OF VTSTT_VOBU_ADMAP	4BYTES
224 TO 227	VTS_C_ADT_SA	START ADDRESS OF VTS_C_ADT	4BYTES
228 TO 231	VTS_VOBU_ADMAP_SA	START ADDRESS OF VTS_VOBU_ADMAP	4BYTES
232 TO 255	RESERVED	RESERVED	24BYTES
256 TO 257	VTSM_V_ATR	VIDEO ATTRIBUTE OF VTSM	2BYTES
258 TO 259	VTSM_AST_Ns	NUMBER OF AUDIO STREAMS OF VTSM	2BYTES
260 TO 267	VTSM_AST_ATR	AUDIO STREAM ATTRIBUTE OF VTSM	8BYTES
268 TO 323	RESERVED	RESERVED	56BYTES
324 TO 339	RESERVED	RESERVED	16BYTES
340 TO 341	VTSM_SPST_Ns	NUMBER OF SUB-PICTURE STREAMS OF VTSM	2BYTES
342 TO 347	VTSM_SPST_ATR	SUB-PICTURE STREAMS ATTRIBUTE TABLE OF VTSM	6BYTES
348 TO 511	RESERVED	RESERVED	164BYTES
512 TO 513	VTS_V_ATR	VIDEO ATTRIBUTE OF VTS	2BYTES
514 TO 515	VTS_AST_Ns	NUMBER OF AUDIO STREAMS OF VTS	2BYTES
516 TO 579	VTS_AST_ATRT	AUDIO STREAM ATTRIBUTE TABLE OF VTS	64BYTES
580 TO 595	RESERVED	RESERVED	16BYTES
596 TO 597	VTS_SPST_Ns	NUMBER OF SUB-PICTURE STREAMS OF VTS	2BYTES
598 TO 789	VTS_SPST_ATRT	SUB-PICTURE STREAMS ATTRIBUTE TABLE OF VTS	192BYTES
790 TO 791	RESERVED	RESERVED	2BYTES
792 TO 983	VTS_MU_AST_ATRT	MULTICHANNEL AUDIO STREAMS ATTRIBUTE TABLE OF VTS	192BYTES
984 TO 1023	RESERVED	RESERVED	40BYTES
1024 TO 2047	RESERVED	RESERVED	1024BYTES

FIG. 7

VTS_AST_ATRT

RBP	CONTENTS	NUMBER OF BYTES
516 TO 523	VTS_AST_ATR OF AUDIO STREAM #0	8BYTES
524 TO 531	VTS_AST_ATR OF AUDIO STREAM #1	8BYTES
532 TO 539	VTS_AST_ATR OF AUDIO STREAM #2	8BYTES
540 TO 547	VTS_AST_ATR OF AUDIO STREAM #3	8BYTES
548 TO 555	VTS_AST_ATR OF AUDIO STREAM #4	8BYTES
556 TO 563	VTS_AST_ATR OF AUDIO STREAM #5	8BYTES
564 TO 571	VTS_AST_ATR OF AUDIO STREAM #6	8BYTES
572 TO 579	VTS_AST_ATR OF AUDIO STREAM #7	8BYTES

FIG. 8A

VTS_AST_ATR

b63	b62	b61	b60	b59	b58	b57	b56
AUDIO CODING MODE			MUTICHANNEL EXTENSION	AUDIO TYPE		AUDIO APPLICATION MODE	
b55	b54	b53	b52	b51	b50	b49	b48
QUANTIZATION/DRC		FS		RESERVED	NUMBER OF AUDIO CHANNELS		
b47	b46	b45	b44	b43	b42	b41	b40
SPECIFIC CODE (UPPER BITS)							
b39	b38	b37	b36	b35	b34	b33	b32
SPECIFIC CODE (LOWER BITS)							
b31	b30	b29	b28	b27	b26	b25	b24
RESERVED (FOR SPECIFIC CODE)							
b23	b22	b21	b20	b19	b18	b17	b16
SPECIFIC CODE EXTENSION							
b15	b14	b13	b12	b11	b10	b9	b8
RESERVED							
b7	b6	b5	b4	b3	b2	b1	b0
APPLICATION INFORMATION							

FIG. 8B

RBP	CONTENTS	NUMBER OF BYTES
792 TO 815	VTS_MU_AST_ATR OF AUDIO STREAM #0	24BYTES
816 TO 839	VTS_MU_AST_ATR OF AUDIO STREAM #1	24BYTES
840 TO 863	VTS_MU_AST_ATR OF AUDIO STREAM #2	24BYTES
864 TO 887	VTS_MU_AST_ATR OF AUDIO STREAM #3	24BYTES
888 TO 911	VTS_MU_AST_ATR OF AUDIO STREAM #4	24BYTES
912 TO 935	VTS_MU_AST_ATR OF AUDIO STREAM #5	24BYTES
936 TO 959	VTS_MU_AST_ATR OF AUDIO STREAM #6	24BYTES
960 TO 983	VTS_MU_AST_ATR OF AUDIO STREAM #7	24BYTES
	TOTAL	192BYTES

FIG. 9A

VTS_MU_AST_ATR(1)

b191 b190	b189 b188	b187 b186 b185 b184
AUDIO MIXED FLAG	ACH0 MIX MODE	AUDIO CHANNEL CONTENTS

b183 b182	b181 b180	b179 b178 b177 b176
AUDIO MIXED FLAG	ACH1 MIX MODE	AUDIO CHANNEL CONTENTS

b175 b174	b173 b172	b171 b170 b169 b168
AUDIO MIXING PHASE	ACH2 MIX MODE	AUDIO CHANNEL CONTENTS

b167 b166	b165 b164	b163 b162 b161 b160
AUDIO MIXING PHASE	ACH3 MIX MODE	AUDIO CHANNEL CONTENTS

b159 b158	b157 b156	b155 b154 b153 b152
AUDIO MIXING PHASE	ACH4 MIX MODE	AUDIO CHANNEL CONTENTS

b151 b150	b149 b148	b147 b146 b145 b144
AUDIO MIXING PHASE	ACH5 MIX MODE	AUDIO CHANNEL CONTENTS

b143 b142	b141 b140	b139 b138 b137 b136
AUDIO MIXING PHASE	ACH6 MIX MODE	AUDIO CHANNEL CONTENTS

b135 b134	b133 b132	b131 b130 b129 b128
AUDIO MIXING PHASE	ACH7 MIX MODE	AUDIO CHANNEL CONTENTS

FIG. 9B

VTS_MU_AST_ATR(2)

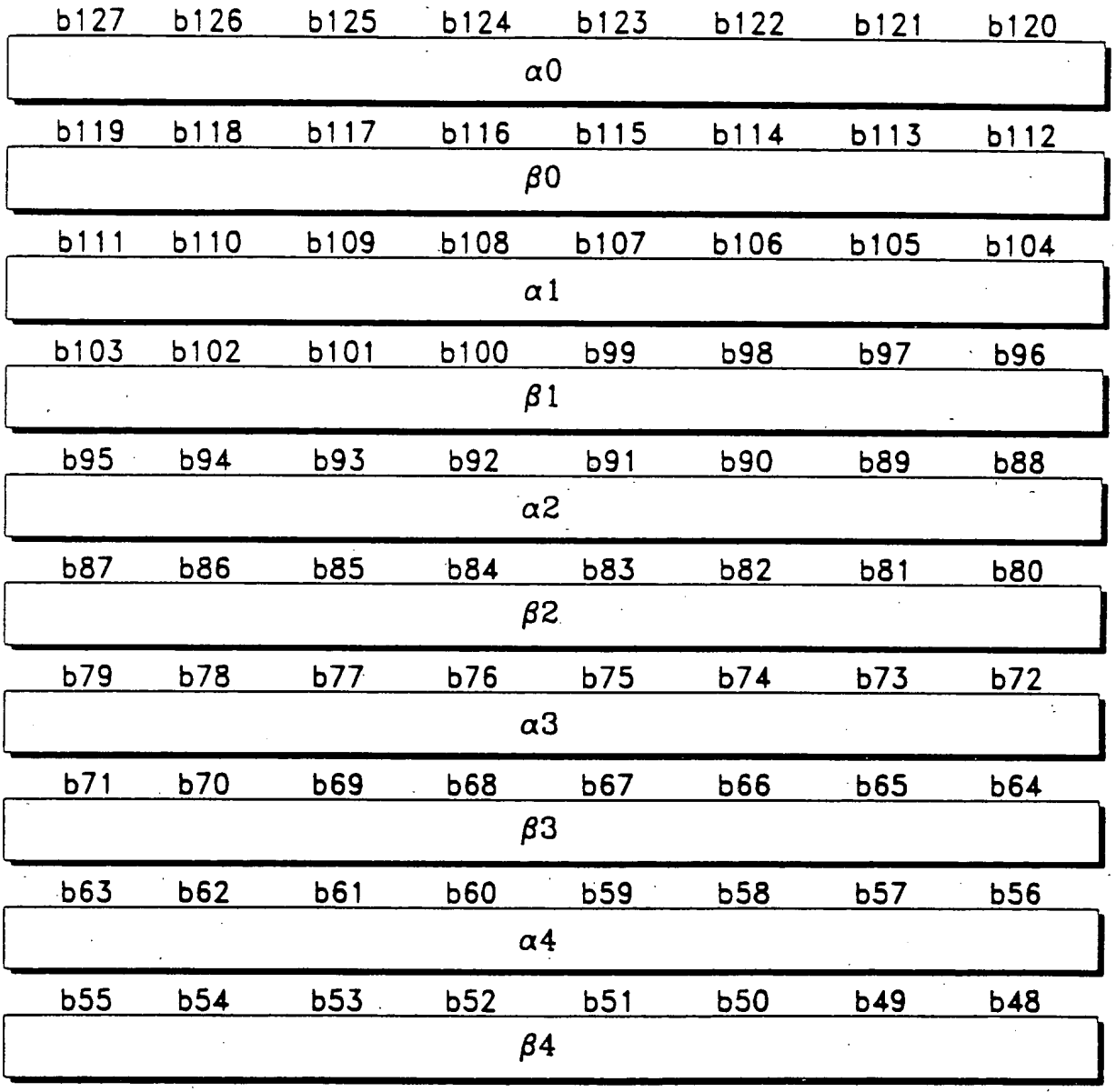

FIG. 9C

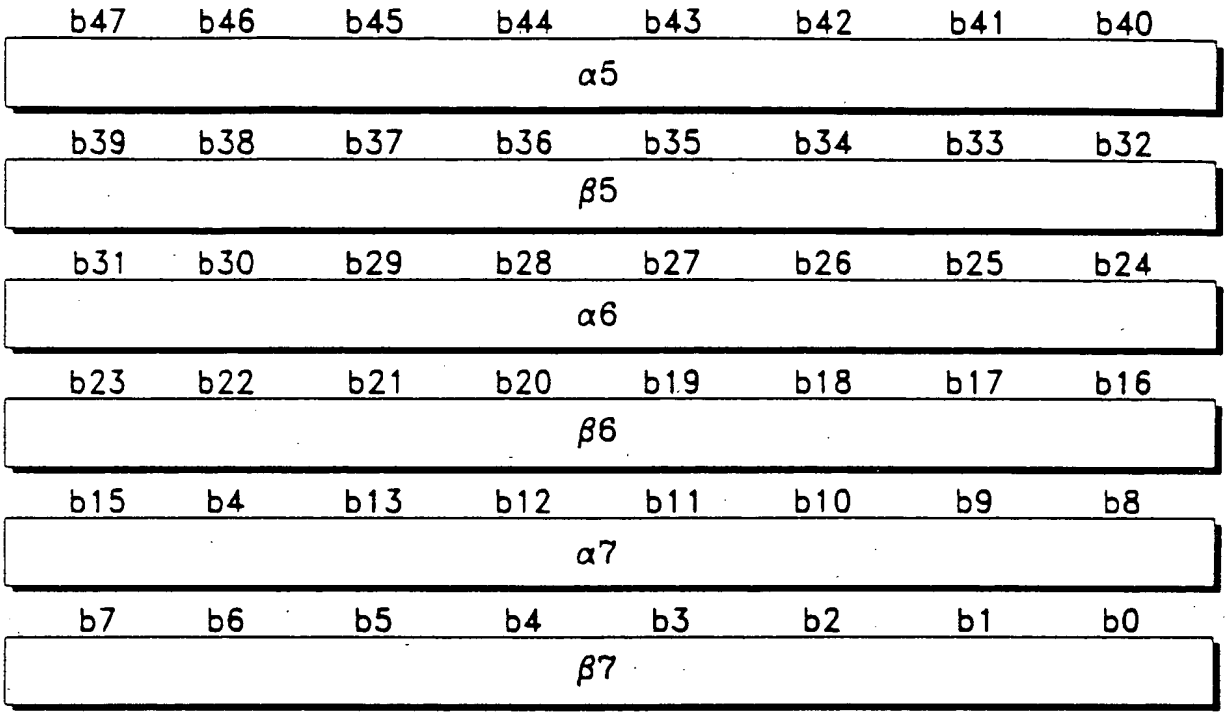
b47 b46 b45 b44 b43 b42 b41 b40
α5
b39 b38 b37 b36 b35 b34 b33 b32
β5
b31 b30 b29 b28 b27 b26 b25 b24
α6
b23 b22 b21 b20 b19 b18 b17 b16
β6
b15 b4 b13 b12 b11 b10 b9 b8
α7
b7 b6 b5 b4 b3 b2 b1 b0
β7

FIG. 9D

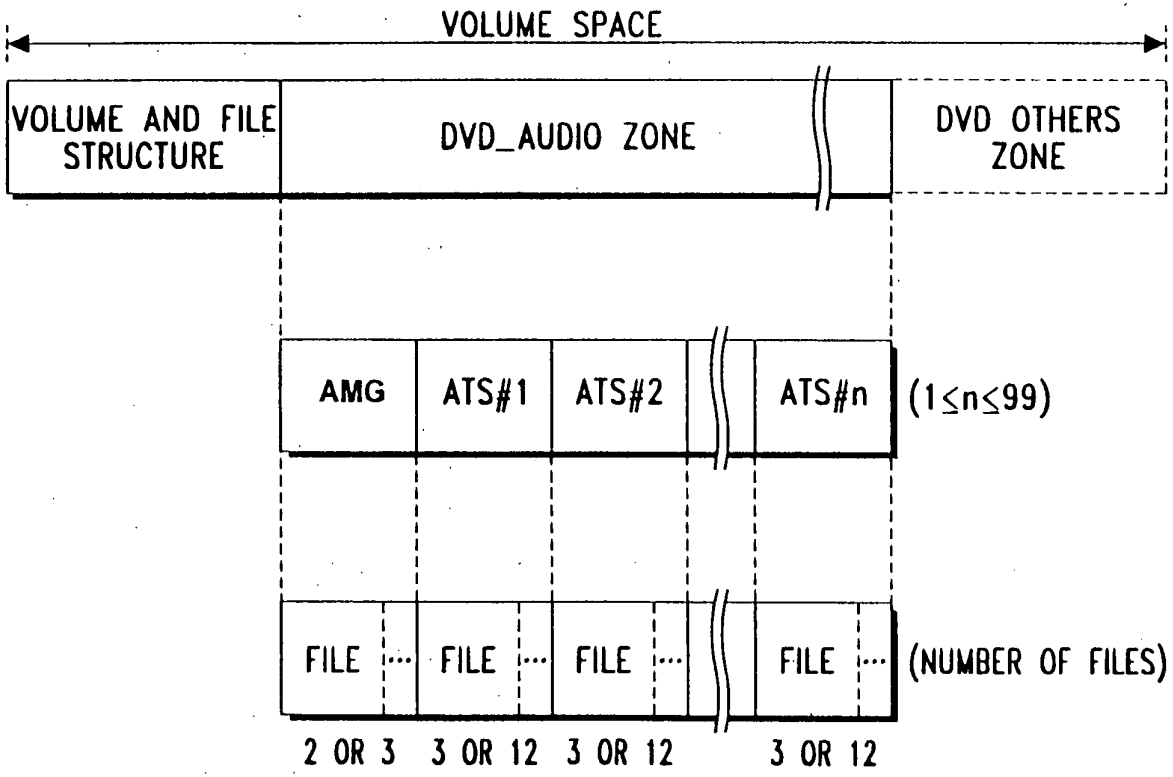
VOLUME SPACE
VOLUME AND FILE STRUCTURE
DVD_AUDIO ZONE
DVD OTHERS ZONE
AMG
ATS#1
ATS#2
ATS#n
(1≤n≤99)
FILE
FILE
FILE
FILE
(NUMBER OF FILES)
2 OR 3
3 OR 12
3 OR 12
3 OR 12

FIG. 10

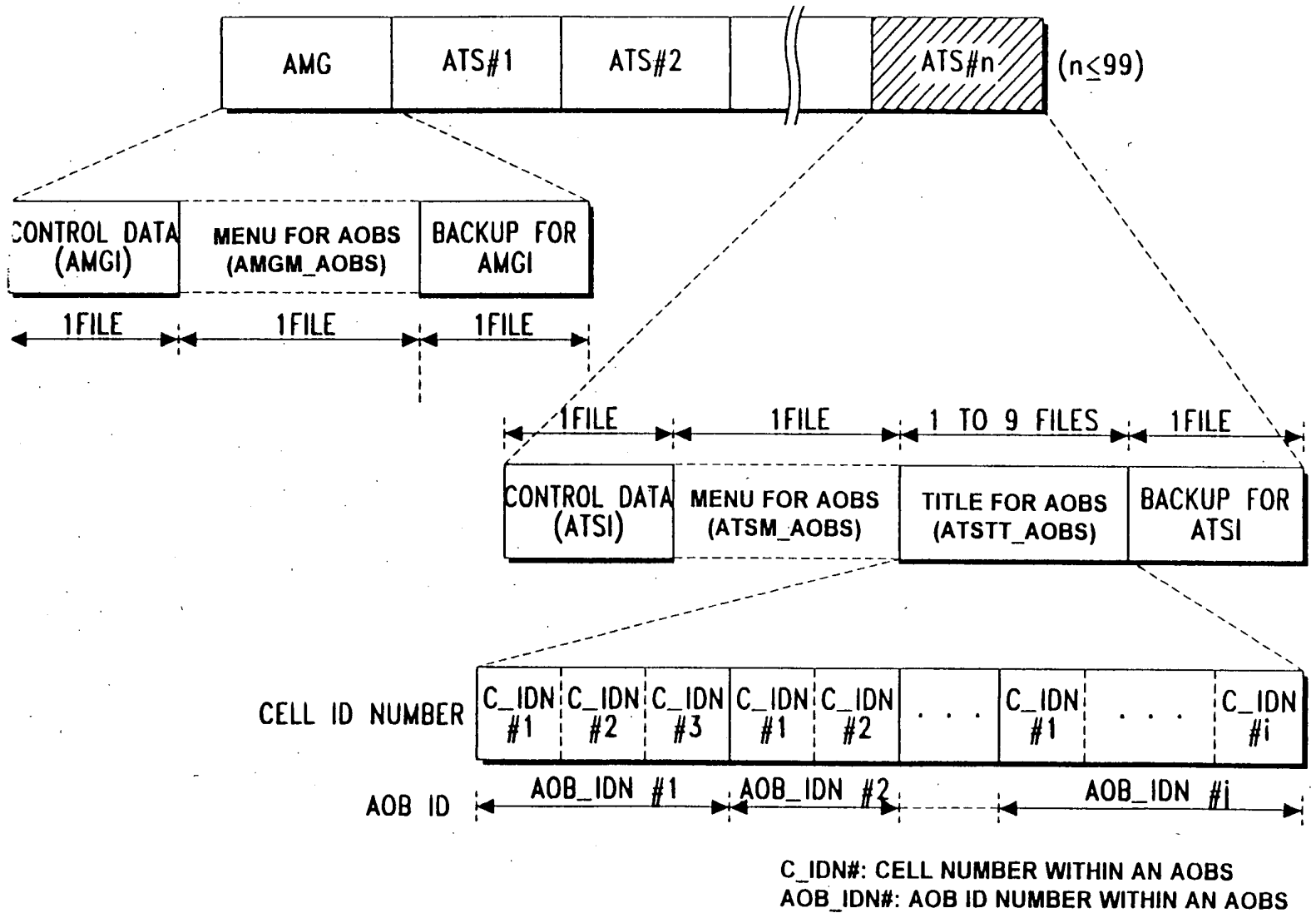
AMG
ATS#1
ATS#2
ATS#n
(n≤99)
CONTROL DATA (AMGI)
MENU FOR AOBS (AMGM_AOBS)
BACKUP FOR AMGI
1FILE
1FILE
1FILE
1FILE
1FILE
1 TO 9 FILES
1FILE
CONTROL DATA (ATSI)
MENU FOR AOBS (ATSM_AOBS)
TITLE FOR AOBS (ATSTT_AOBS)
BACKUP FOR ATSI
CELL ID NUMBER
C_IDN #1
C_IDN #2
C_IDN #3
C_IDN #1
C_IDN #2
C_IDN #1
C_IDN #i
AOB ID
AOB_IDN #1
AOB_IDN #2
AOB_IDN #i
C_IDN#: CELL NUMBER WITHIN AN AOBS
AOB_IDN#: AOB ID NUMBER WITHIN AN AOBS

FIG. 11

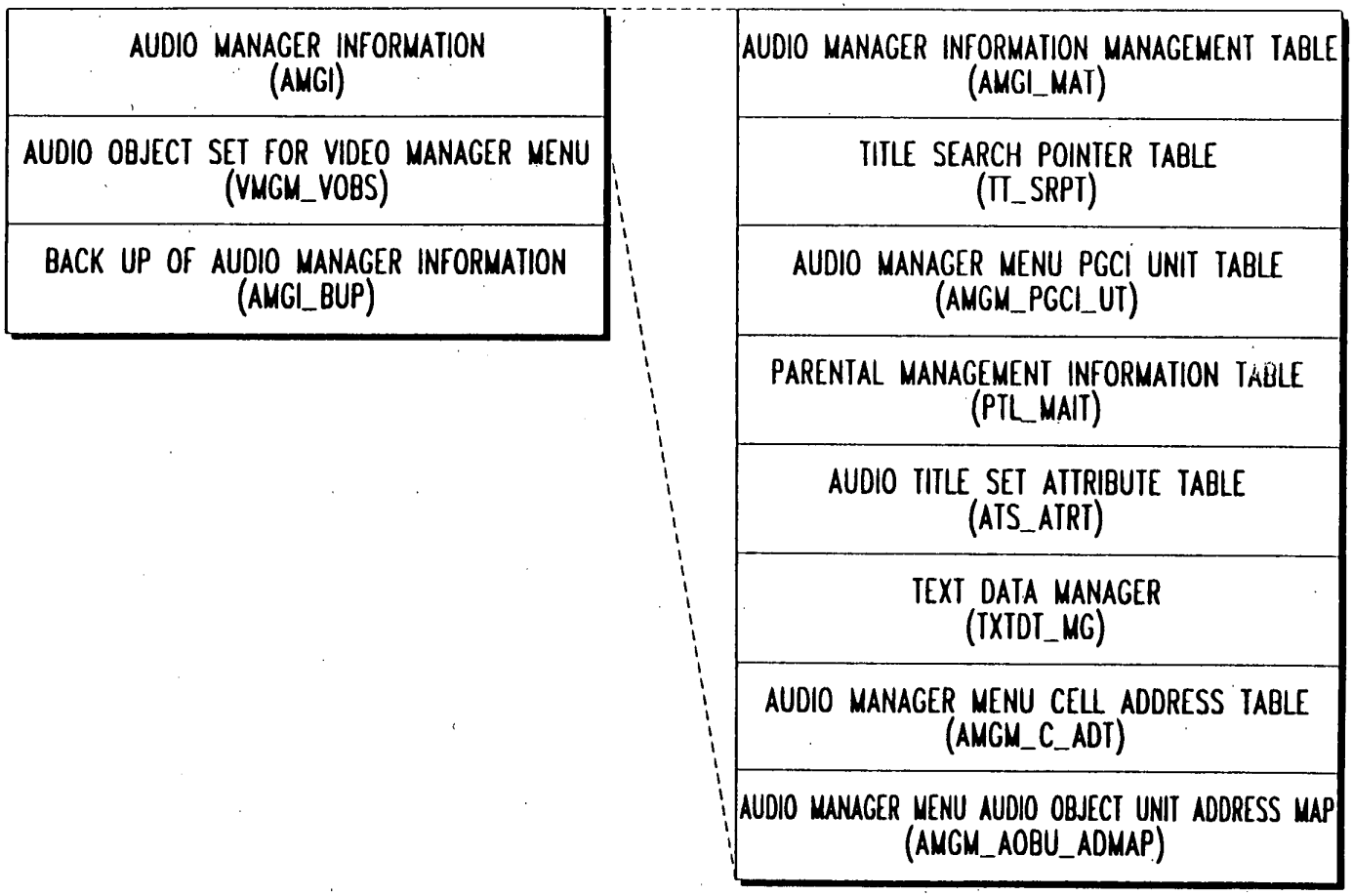
AUDIO MANAGER INFORMATION (AMGI)
AUDIO OBJECT SET FOR VIDEO MANAGER MENU (VMGM_VOBS)
BACK UP OF AUDIO MANAGER INFORMATION (AMGI_BUP)
AUDIO MANAGER INFORMATION MANAGEMENT TABLE (AMGI_MAT)
TITLE SEARCH POINTER TABLE (TT_SRPT)
AUDIO MANAGER MENU PGCI UNIT TABLE (AMGM_PGCI_UT)
PARENTAL MANAGEMENT INFORMATION TABLE (PTL_MAIT)
AUDIO TITLE SET ATTRIBUTE TABLE (ATS_ATRT)
TEXT DATA MANAGER (TXTDT_MG)
AUDIO MANAGER MENU CELL ADDRESS TABLE (AMGM_C_ADT)
AUDIO MANAGER MENU AUDIO OBJECT UNIT ADDRESS MAP (AMGM_AOBU_ADMAP)

FIG. 12

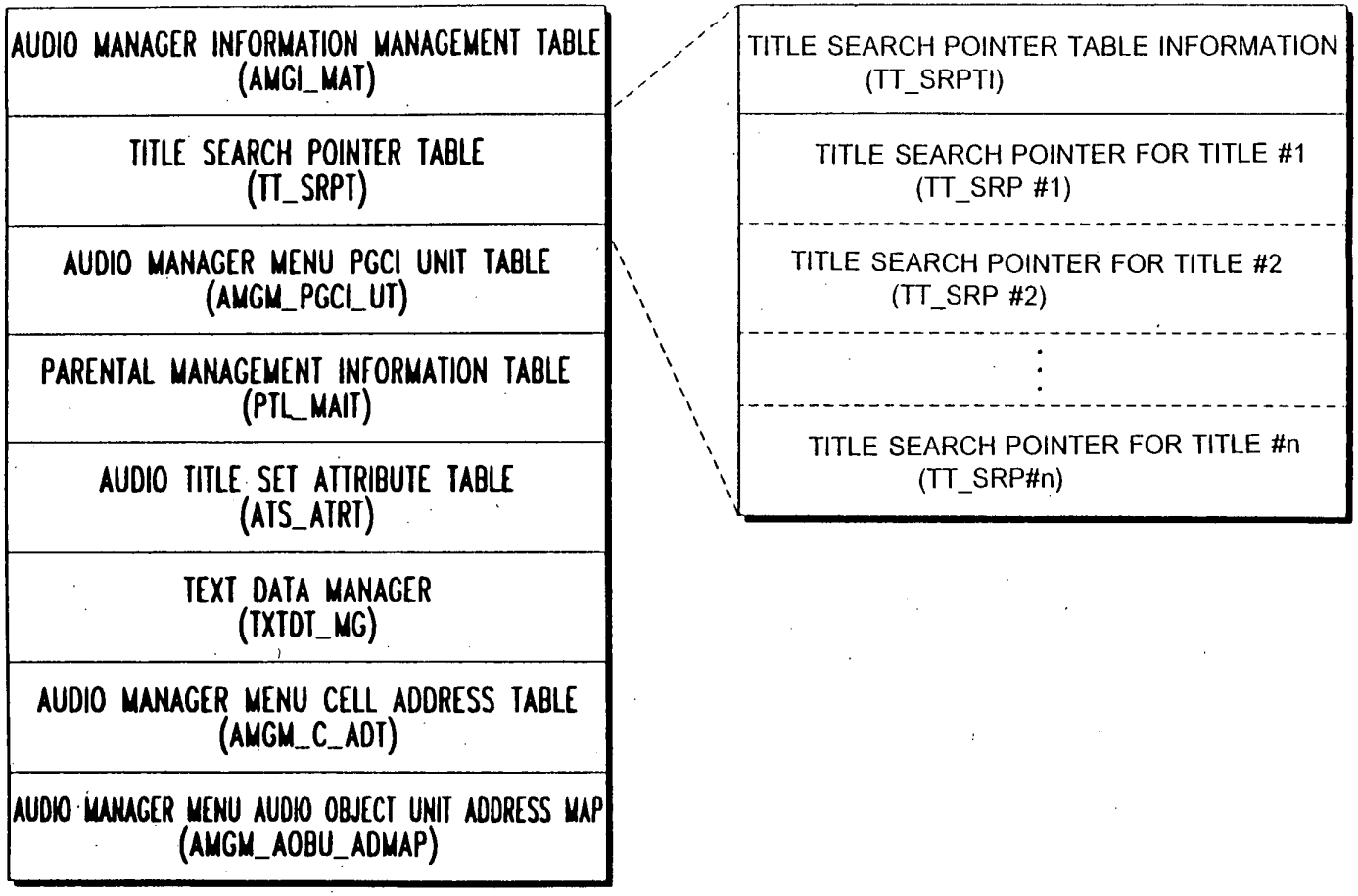
AUDIO MANAGER INFORMATION MANAGEMENT TABLE
(AMGI_MAT)
TITLE SEARCH POINTER TABLE
(TT_SRPT)
AUDIO MANAGER MENU PGCI UNIT TABLE
(AMGM_PGCI_UT)
PARENTAL MANAGEMENT INFORMATION TABLE
(PTL_MAIT)
AUDIO TITLE SET ATTRIBUTE TABLE
(ATS_ATRT)
TEXT DATA MANAGER
(TXTDT_MG)
AUDIO MANAGER MENU CELL ADDRESS TABLE
(AMGM_C_ADT)
AUDIO MANAGER MENU AUDIO OBJECT UNIT ADDRESS MAP
(AMGM_AOBU_ADMAP)
TITLE SEARCH POINTER TABLE INFORMATION
(TT_SRPTI)
TITLE SEARCH POINTER FOR TITLE #1
(TT_SRP #1)
TITLE SEARCH POINTER FOR TITLE #2
(TT_SRP #2)
TITLE SEARCH POINTER FOR TITLE #n
(TT_SRP#n)

FIG. 13

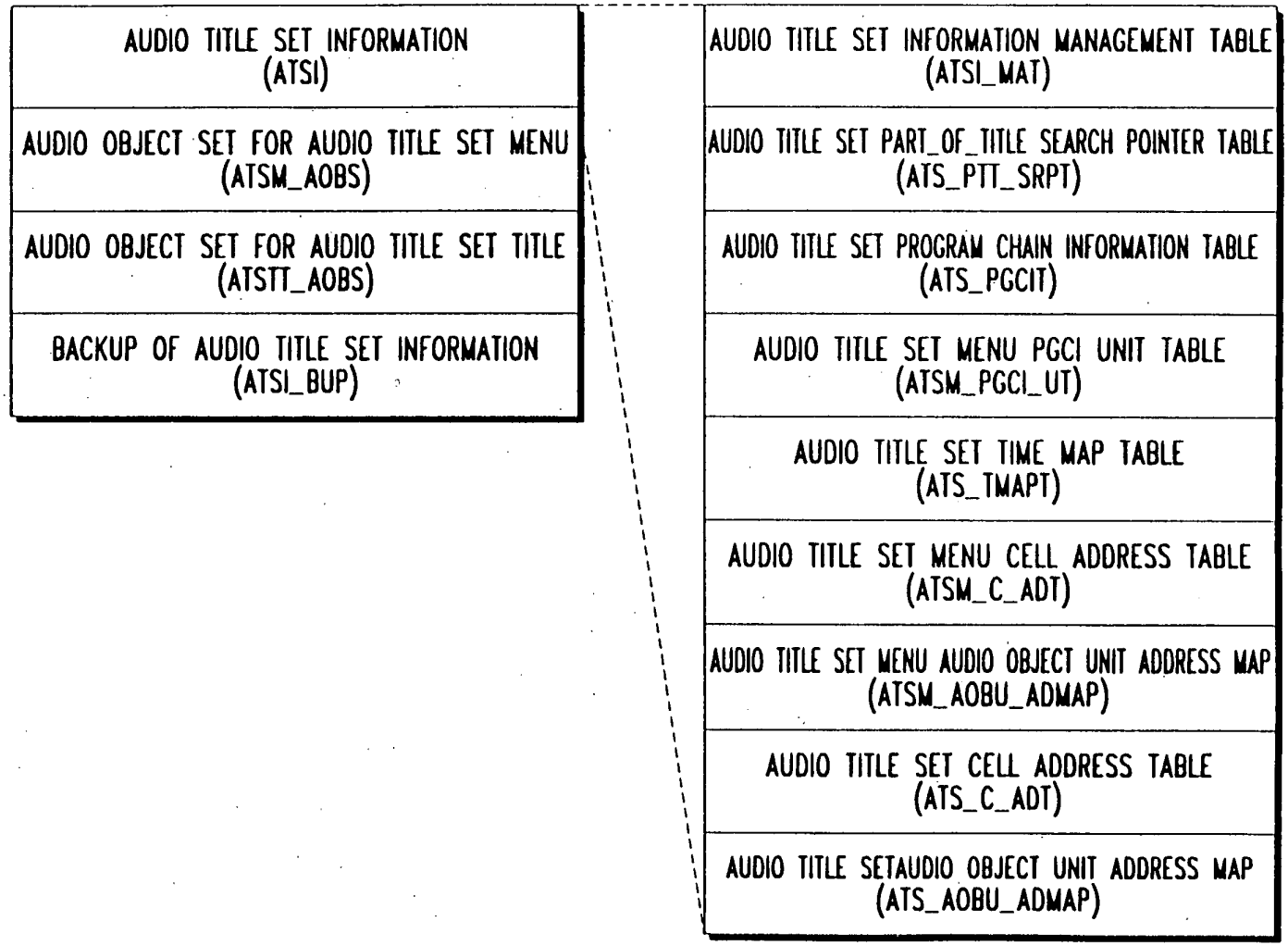
AUDIO TITLE SET INFORMATION (ATSI)
AUDIO OBJECT SET FOR AUDIO TITLE SET MENU (ATSM_AOBS)
AUDIO OBJECT SET FOR AUDIO TITLE SET TITLE (ATSTT_AOBS)
BACKUP OF AUDIO TITLE SET INFORMATION (ATSI_BUP)
AUDIO TITLE SET INFORMATION MANAGEMENT TABLE (ATSI_MAT)
AUDIO TITLE SET PART_OF_TITLE SEARCH POINTER TABLE (ATS_PTT_SRPT)
AUDIO TITLE SET PROGRAM CHAIN INFORMATION TABLE (ATS_PGCIT)
AUDIO TITLE SET MENU PGCI UNIT TABLE (ATSM_PGCI_UT)
AUDIO TITLE SET TIME MAP TABLE (ATS_TMAPT)
AUDIO TITLE SET MENU CELL ADDRESS TABLE (ATSM_C_ADT)
AUDIO TITLE SET MENU AUDIO OBJECT UNIT ADDRESS MAP (ATSM_AOBU_ADMAP)
AUDIO TITLE SET CELL ADDRESS TABLE (ATS_C_ADT)
AUDIO TITLE SETAUDIO OBJECT UNIT ADDRESS MAP (ATS_AOBU_ADMAP)

FIG. 14

ATSI_MAT

RBP		CONTENTS	NUMBER OF BYTES
0 TO 11	ATS_ID	ATS IDENTIFIER	12BYTES
12 TO 15	ATS_EA	END ADDRESS OF ATS	4BYTES
16 TO 27	RESERVED	RESERVED	12BYTES
28 TO 31	ATSI_EA	END ADDRESS OF ATSI	4BYTES
32 TO 33	VERN	VERSION NUMBER OF DVD VIDEO SPECIFICATION	2BYTES
34 TO 37	ATS_CAT	ATS CATEGORY	90BYTES
38 TO 127	RESERVED	RESERVED	4BYTES
128 TO 131	ATSI_MAT_EA	END ADDRESS OF ATSI_MAT	60BYTES
132 TO 191	RESERVED	RESERVED	4BYTES
192 TO 195	ATSM_VOBS_SA	START ADDRESS OF ATSM_AOBS	4BYTES
196 TO 199	ATSTT_VOBS_SA	START ADDRESS OF ATSTT_AOBS	4BYTES
200 TO 203	ATS_PTT_SRPT_SA	START ADDRESS OF ATS_PTT_SRPT	4BYTES
204 TO 207	ATS_PGCIT_SA	START ADDRESS OF ATS_PGCIT	4BYTES
208 TO 211	ATSM_PGCI_UT_SA	START ADDRESS OF ATSM_PGCI_UT	4BYTES
212 TO 215	ATS_TMAPT_SA	START ADDRESS OF ATS_TMAPT	4BYTES
216 TO 219	ATSM_C_ADT_SA	START ADDRESS OF ATSM_C_ADT	4BYTES
220 TO 223	ATSM_VOBU_ADMAP_SA	START ADDRESS OF ATSTT_AOBU_ADMAP	4BYTES
224 TO 227	ATS_C_ADT_SA	START ADDRESS OF ATS_C_ADT	4BYTES
228 TO 231	ATS_VOBU_ADMAP_SA	START ADDRESS OF ATS_AOBU_ADMAP	4BYTES
232 TO 255	RESERVED	RESERVED	24BYTES
256 TO 257	ATSM_V_ATR	VIDEO ATTRIBUTE OF ATSM	2BYTES
258 TO 259	ATSM_AST_Ns	NUMBER OF AUDIO STREAMS OF ATSM	2BYTES
260 TO 267	ATSM_AST_ATR	AUDIO STREAM ATTRIBUTE OF ATSM	8BYTES
268 TO 323	RESERVED	RESERVED	56BYTES
324 TO 339	RESERVED	RESERVED	16BYTES
340 TO 341	ATSM_SPST_Ns	NUMBER OF SUB-PICTURE STREAMS OF ATSM	2BYTES
342 TO 347	ATSM_SPST_ATR	SUB-PICTURE STREAMS ATTRIBUTE TABLE OF ATSM	6BYTES
348 TO 511	RESERVED	RESERVED	164BYTES
512 TO 513	ATS_V_ATR	VIDEO ATTRIBUTE OF ATS	2BYTES
514 TO 515	ATS_AST_Ns	NUMBER OF AUDIO STREAMS OF ATS	2BYTES
516 TO 579	ATS_AST_ATR	AUDIO STREAM ATTRIBUTE TABLE OF ATS	64BYTES
580 TO 595	RESERVED	RESERVED	16BYTES
596 TO 597	ATS_SPST_Ns	NUMBER OF SUB-PICTURE STREAMS OF ATS	2BYTES
598 TO 789	ATS_SPST_ATRT	SUB-PICTURE STREAMS ATTRIBUTE TABLE OF ATS	192BYTES
790 TO 791	RESERVED	RESERVED	2BYTES
792 TO 1298	ATS_MU_AST_ATRT	MULTICHANNEL AUDIO STREAMS ATTRIBUTE TABLE OF ATS	507BYTES
1299 TO 1299	RESERVED	RESERVED	749BYTES

FIG. 15

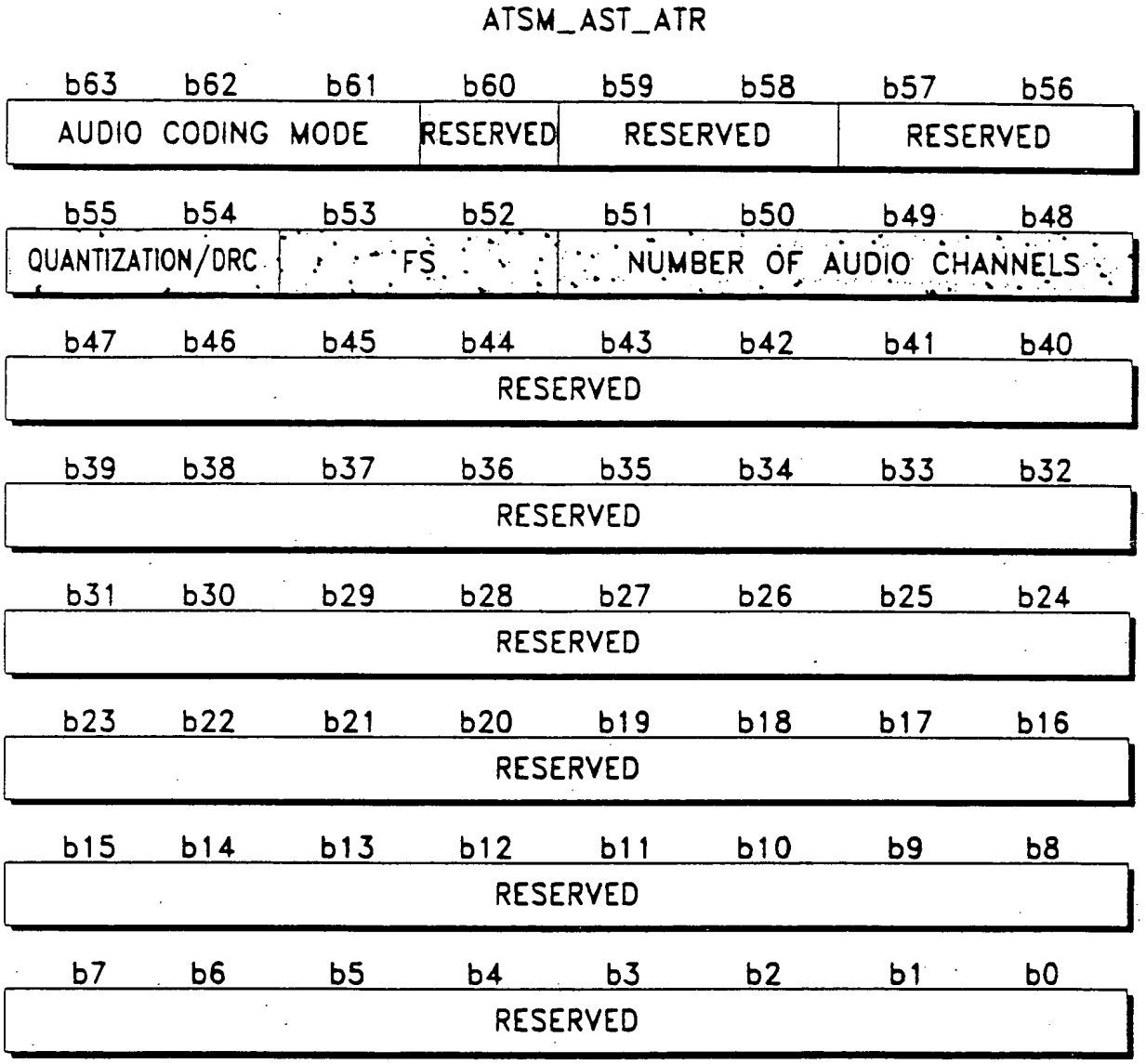
ATSM_AST_ATR
b63 b62 b61 b60 b59 b58 b57 b56
AUDIO CODING MODE
RESERVED
RESERVED
RESERVED
b55 b54 b53 b52 b51 b50 b49 b48
QUANTIZATION/DRC
FS
NUMBER OF AUDIO CHANNELS
b47 b46 b45 b44 b43 b42 b41 b40
RESERVED
b39 b38 b37 b36 b35 b34 b33 b32
RESERVED
b31 b30 b29 b28 b27 b26 b25 b24
RESERVED
b23 b22 b21 b20 b19 b18 b17 b16
RESERVED
b15 b14 b13 b12 b11 b10 b9 b8
RESERVED
b7 b6 b5 b4 b3 b2 b1 b0
RESERVED

FIG. 16

ATS_AST_ATRT

RBP	CONTENTS	NUMBER OF BYTES
516 TO 523	ATS_AST_ATR OF AUDIO STREAM #0	8BYTES
524 TO 531	ATS_AST_ATR OF AUDIO STREAM #1	8BYTES
532 TO 539	ATS_AST_ATR OF AUDIO STREAM #2	8BYTES
540 TO 547	ATS_AST_ATR OF AUDIO STREAM #3	8BYTES
548 TO 555	ATS_AST_ATR OF AUDIO STREAM #4	8BYTES
556 TO 563	ATS_AST_ATR OF AUDIO STREAM #5	8BYTES
564 TO 571	ATS_AST_ATR OF AUDIO STREAM #6	8BYTES
572 TO 579	ATS_AST_ATR OF AUDIO STREAM #7	8BYTES

FIG. 17A

ATS_AST_ATR

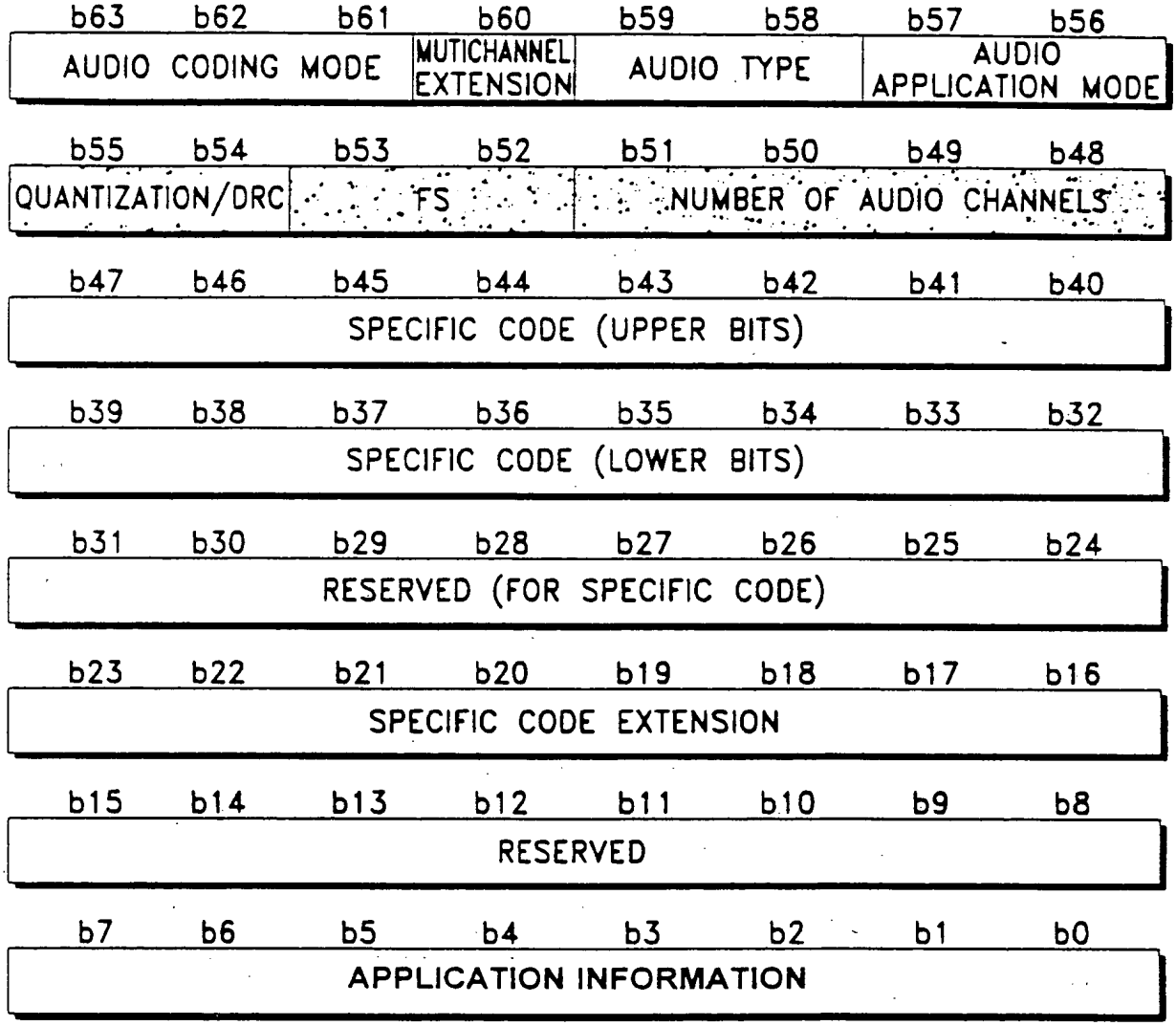

FIG. 17B

RBP	CONTENTS	NUMBER OF BYTES
792 TO 830	ATS_MU_AST_ATR OF AUDIO STREAM #0	39BYTES
831 TO 869	ATS_MU_AST_ATR OF AUDIO STREAM #1	39BYTES
870 TO 908	ATS_MU_AST_ATR OF AUDIO STREAM #2	39BYTES
909 TO 947	ATS_MU_AST_ATR OF AUDIO STREAM #3	39BYTES
948 TO 986	ATS_MU_AST_ATR OF AUDIO STREAM #4	39BYTES
987 TO 1025	ATS_MU_AST_ATR OF AUDIO STREAM #5	39BYTES
1026 TO 1064	ATS_MU_AST_ATR OF AUDIO STREAM #6	39BYTES
1065 TO 1103	ATS_MU_AST_ATR OF AUDIO STREAM #7	39BYTES
1104 TO 1142	ATS_MU_AST_ATR OF AUDIO STREAM #8	39BYTES
1143 TO 1181	ATS_MU_AST_ATR OF AUDIO STREAM #9	39BYTES
1182 TO 1220	ATS_MU_AST_ATR OF AUDIO STREAM #10	39BYTES
1221 TO 1259	ATS_MU_AST_ATR OF AUDIO STREAM #11	39BYTES
1260 TO 1298	ATS_MU_AST_ATR OF AUDIO STREAM #12	39BYTES
	TOTAL	507BYTES

FIG. 18A

ATS_MU_AST_ATR_EXT(1)

b39 b38	b37 b36	b35 b34 b33 b32
AUDIO MIXED FLAG	ACH8 MIX MODE	AUDIO CHANNEL CONTENTS

b31 b30	b29 b28	b27 b26 b25 b24
AUDIO MIXED FLAG	ACH9 MIX MODE	AUDIO CHANNEL CONTENTS

b23 b22	b21 b20	b19 b18 b17 b16
AUDIO MIXED FLAG	ACH10 MIX MODE	AUDIO CHANNEL CONTENTS

b15 b14	b13 b12	b11 b10 b9 b8
AUDIO MIXED FLAG	ACH11 MIX MODE	AUDIO CHANNEL CONTENTS

b7 b6	b5 b4	b3 b2 b1 b0
AUDIO MIXED FLAG	ACH12 MIX MODE	AUDIO CHANNEL CONTENTS

FIG. 18B

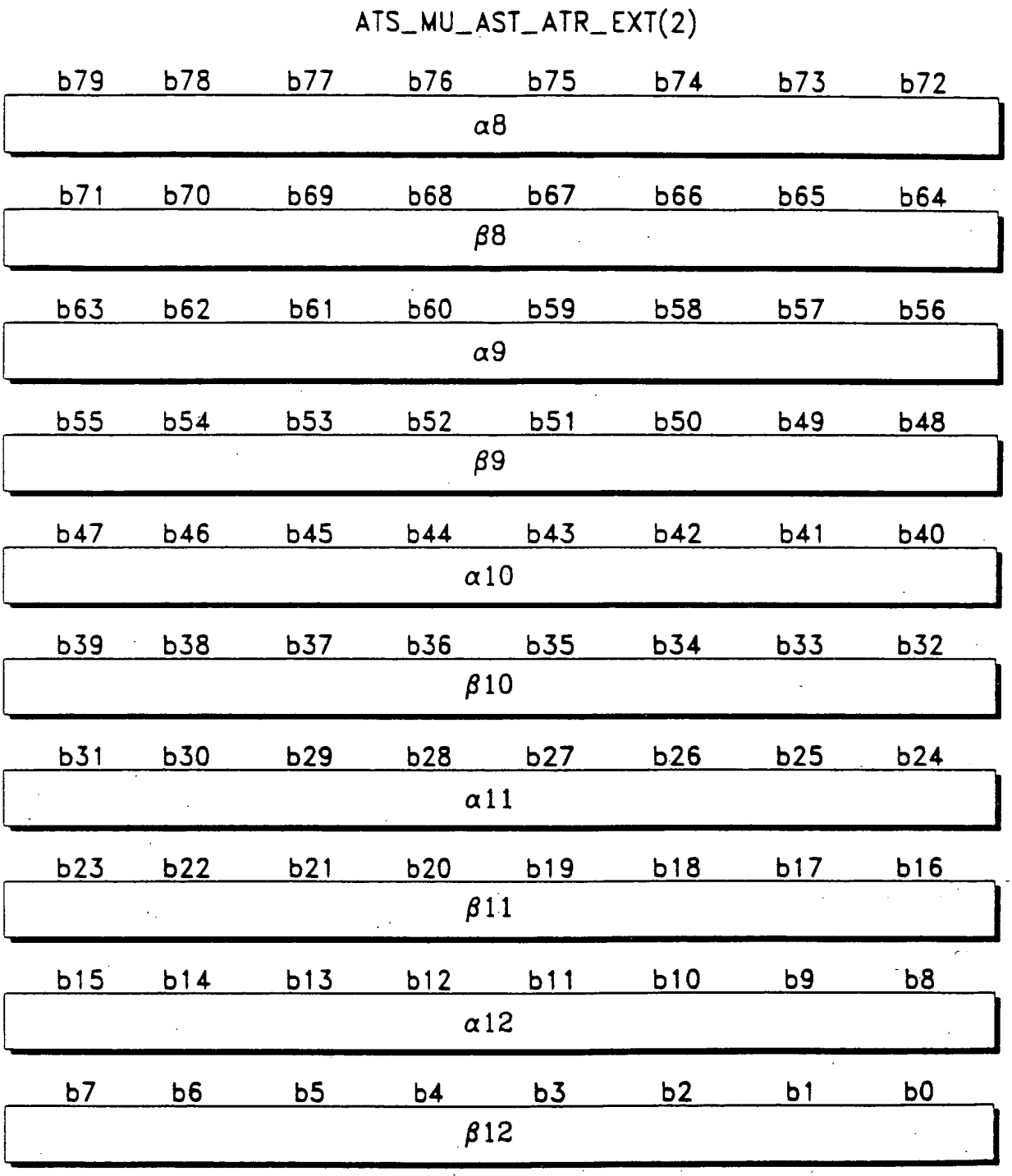
ATS_MU_AST_ATR_EXT(2)
b79 b78 b77 b76 b75 b74 b73 b72
α8
b71 b70 b69 b68 b67 b66 b65 b64
β8
b63 b62 b61 b60 b59 b58 b57 b56
α9
b55 b54 b53 b52 b51 b50 b49 b48
β9
b47 b46 b45 b44 b43 b42 b41 b40
α10
b39 b38 b37 b36 b35 b34 b33 b32
β10
b31 b30 b29 b28 b27 b26 b25 b24
α11
b23 b22 b21 b20 b19 b18 b17 b16
β11
b15 b14 b13 b12 b11 b10 b9 b8
α12
b7 b6 b5 b4 b3 b2 b1 b0
β12

FIG. 18C

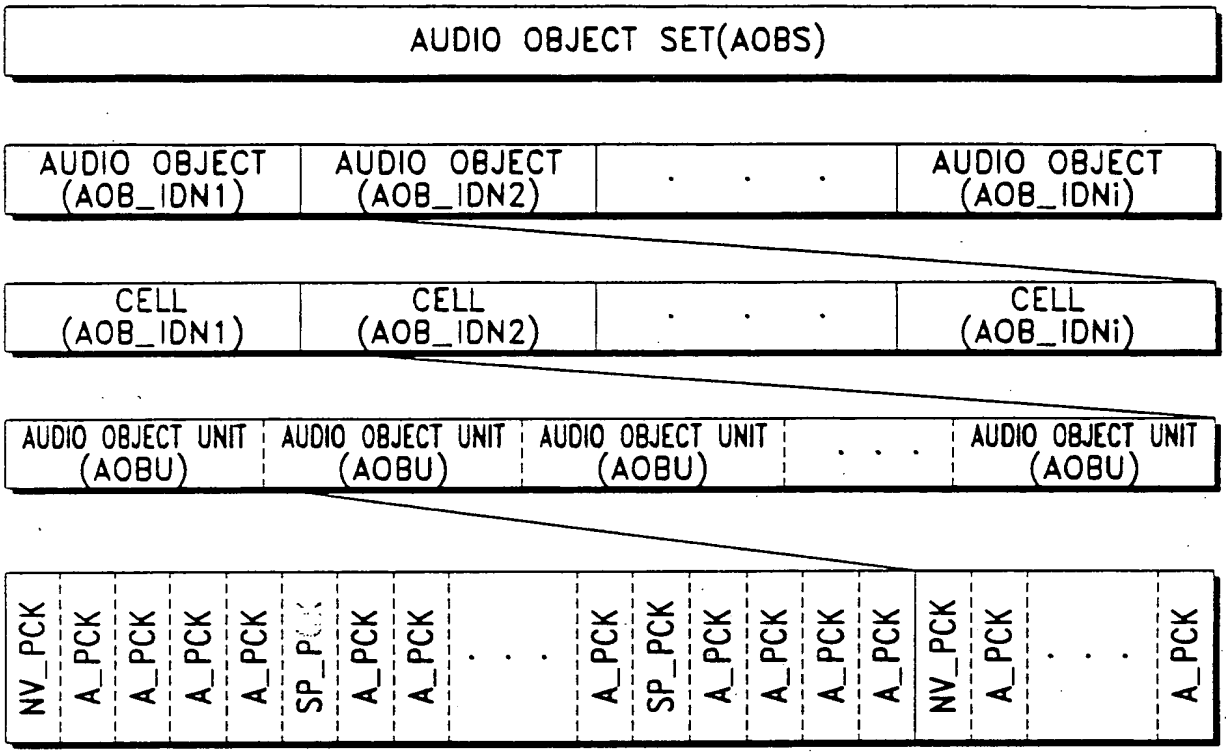
AUDIO OBJECT SET(AOBS)
AUDIO OBJECT (AOB_IDN1)
AUDIO OBJECT (AOB_IDN2)
AUDIO OBJECT (AOB_IDNi)
CELL (AOB_IDN1)
CELL (AOB_IDN2)
CELL (AOB_IDNi)
AUDIO OBJECT UNIT (AOBU)
AUDIO OBJECT UNIT (AOBU)
AUDIO OBJECT UNIT (AOBU)
AUDIO OBJECT UNIT (AOBU)
NV_PCK
A_PCK
SP_PCK

FIG. 19

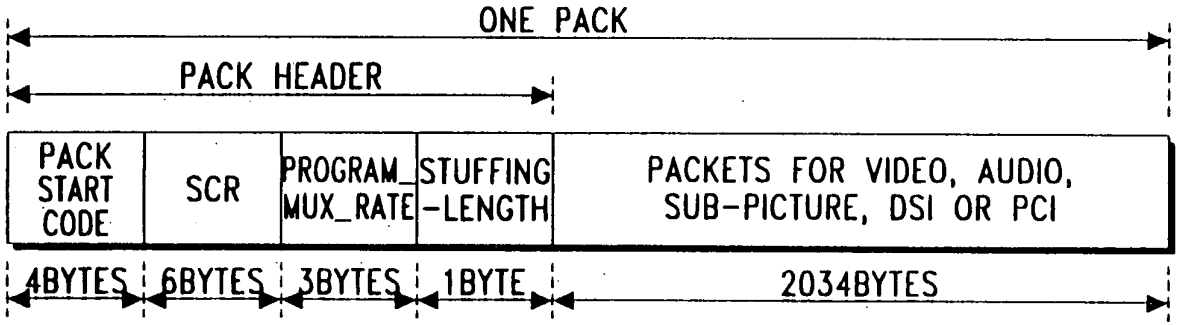
ONE PACK
PACK HEADER
PACK START CODE
SCR
PROGRAM_ MUX_RATE
STUFFING -LENGTH
PACKETS FOR VIDEO, AUDIO, SUB-PICTURE, DSI OR PCI
4BYTES
6BYTES
3BYTES
1BYTE
2034BYTES

FIG. 20

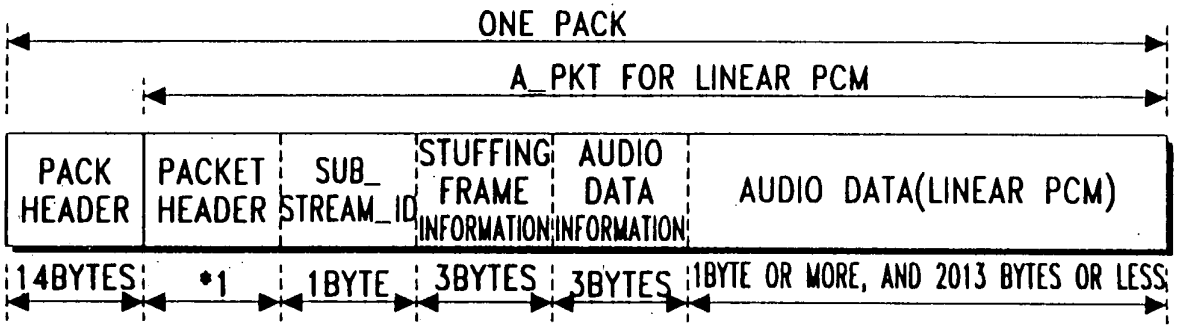
ONE PACK
A_PKT FOR LINEAR PCM
PACK HEADER
PACKET HEADER
SUB_ STREAM_ID
STUFFING FRAME INFORMATION
AUDIO DATA INFORMATION
AUDIO DATA(LINEAR PCM)
14BYTES
*1
1BYTE
3BYTES
3BYTES
1BYTE OR MORE, AND 2013 BYTES OR LESS

FIG. 21A

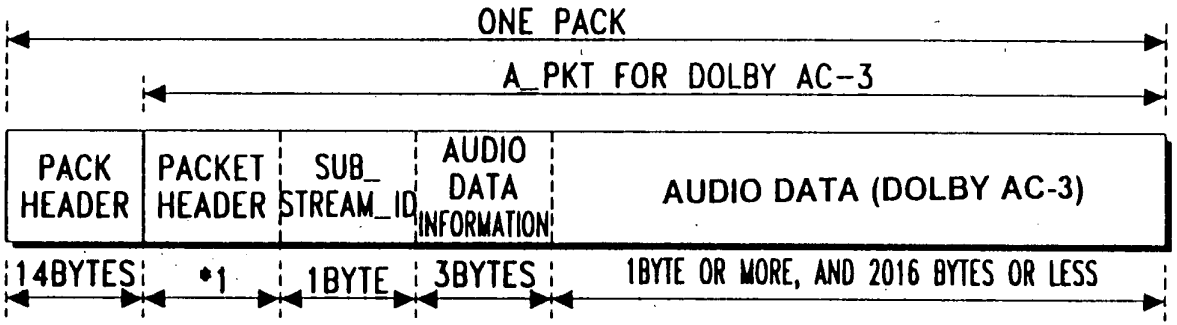
ONE PACK
A_PKT FOR DOLBY AC-3
PACK HEADER
PACKET HEADER
SUB_ STREAM_ID
AUDIO DATA INFORMATION
AUDIO DATA (DOLBY AC-3)
14BYTES
*1
1BYTE
3BYTES
1BYTE OR MORE, AND 2016 BYTES OR LESS

FIG. 21B

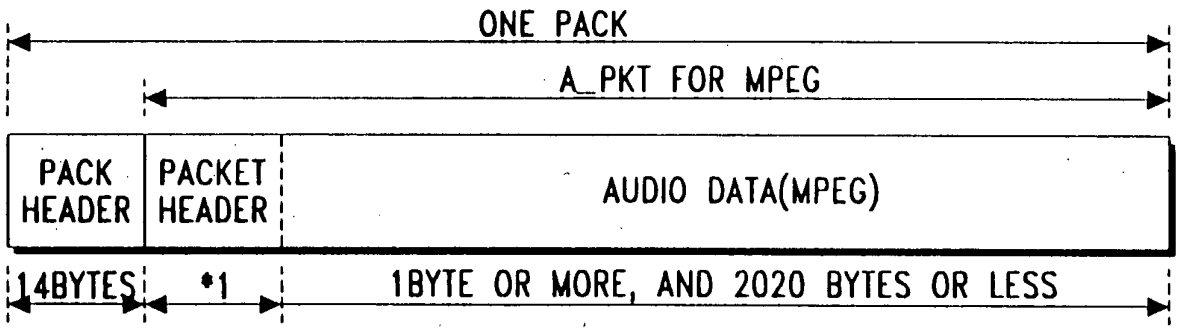
ONE PACK
A_PKT FOR MPEG
PACK HEADER
PACKET HEADER
AUDIO DATA(MPEG)
14BYTES
*1
1BYTE OR MORE, AND 2020 BYTES OR LESS

FIG. 21C

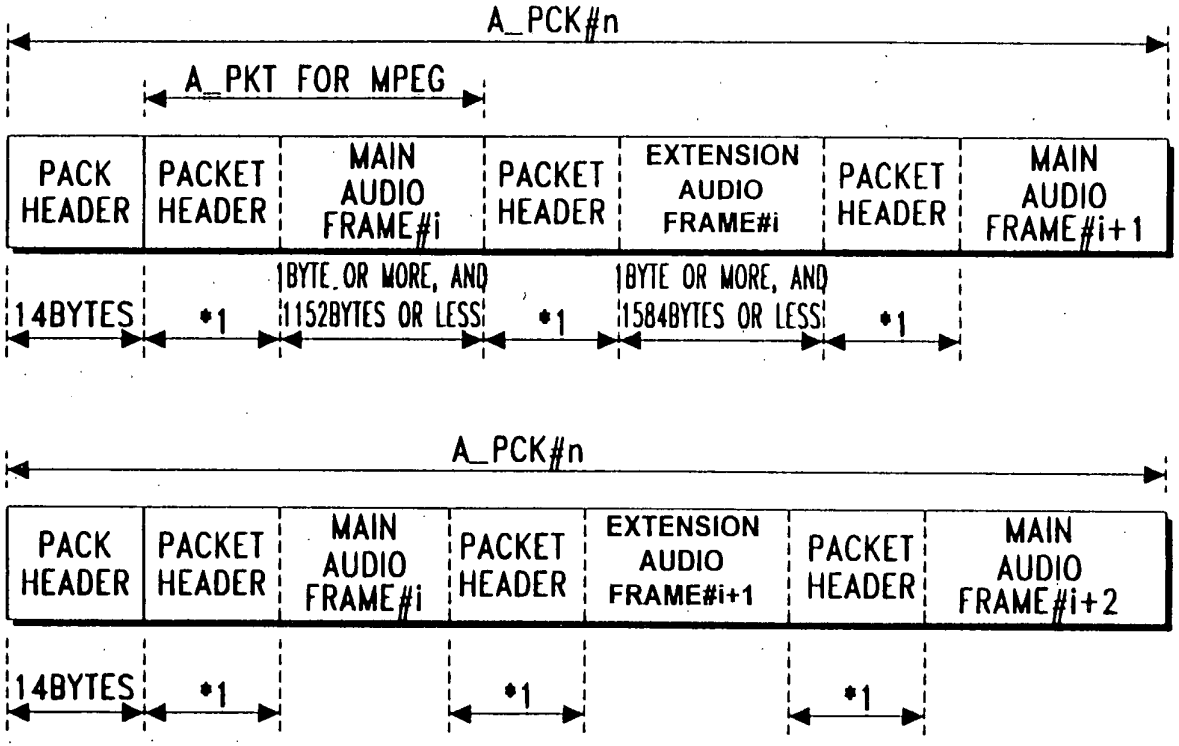
A_PCK#n
A_PKT FOR MPEG
PACK HEADER
PACKET HEADER
MAIN AUDIO FRAME#i
PACKET HEADER
EXTENSION AUDIO FRAME#i
PACKET HEADER
MAIN AUDIO FRAME#i+1
14BYTES
*1
1BYTE OR MORE, AND 1152BYTES OR LESS
*1
1BYTE OR MORE, AND 1584BYTES OR LESS
*1
A_PCK#n
PACK HEADER
PACKET HEADER
MAIN AUDIO FRAME#i
PACKET HEADER
EXTENSION AUDIO FRAME#i+1
PACKET HEADER
MAIN AUDIO FRAME#i+2
14BYTES
*1
*1
*1

FIG. 21D

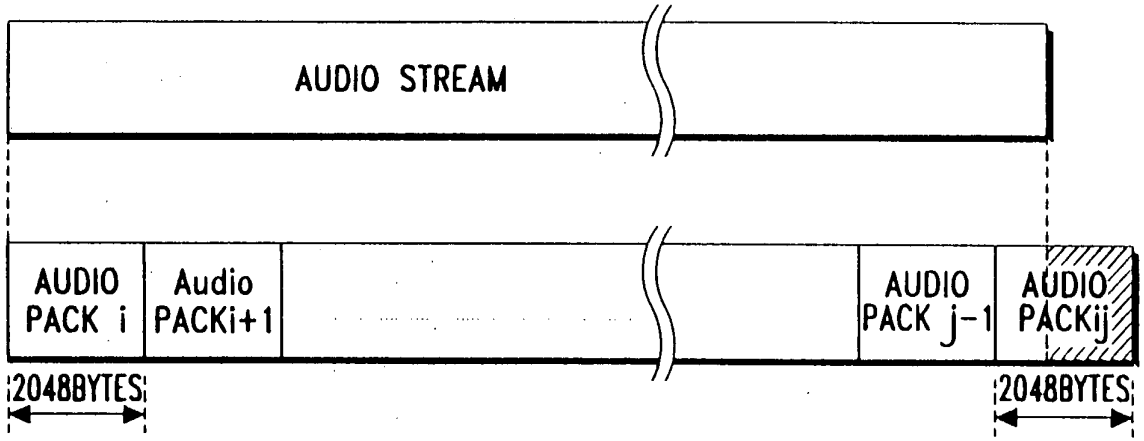
AUDIO STREAM
AUDIO PACK i
Audio PACKi+1
AUDIO PACK j-1
AUDIO PACKij
2048BYTES
2048BYTES

FIG. 22

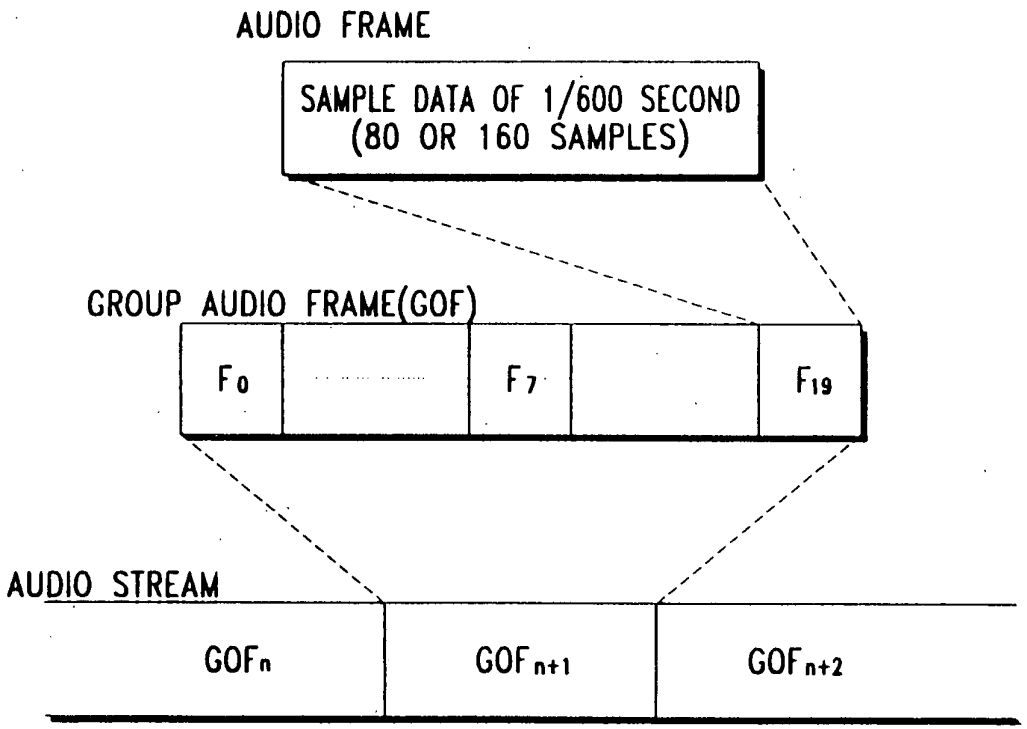
AUDIO FRAME
SAMPLE DATA OF 1/600 SECOND
(80 OR 160 SAMPLES)
GROUP AUDIO FRAME(GOF)
F0
F7
F19
AUDIO STREAM
GOFn
GOFn+1
GOFn+2

FIG. 23

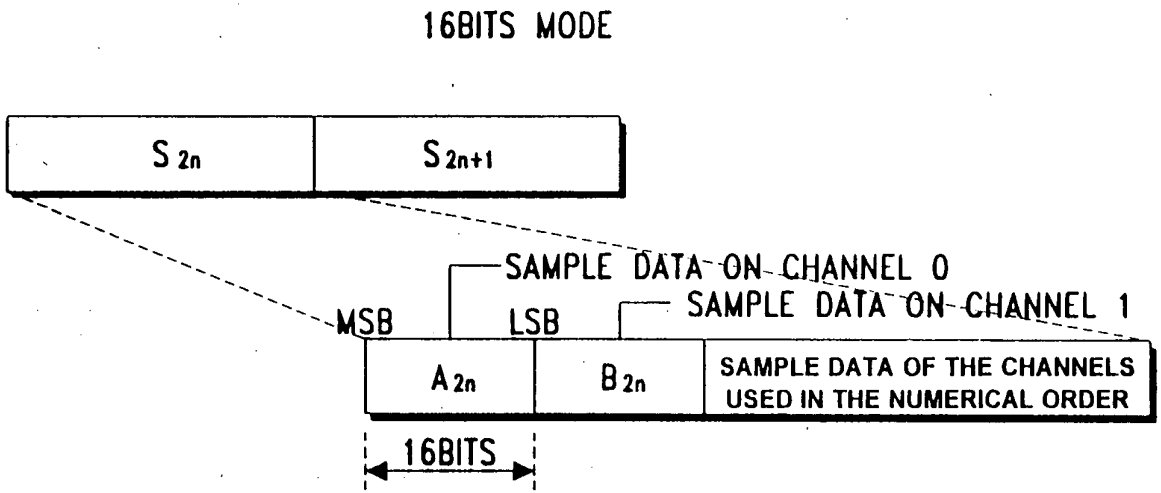
16BITS MODE
S 2n
S 2n+1
SAMPLE DATA ON CHANNEL 0
SAMPLE DATA ON CHANNEL 1
MSB
LSB
A 2n
B 2n
SAMPLE DATA OF THE CHANNELS USED IN THE NUMERICAL ORDER
16BITS

FIG. 24A

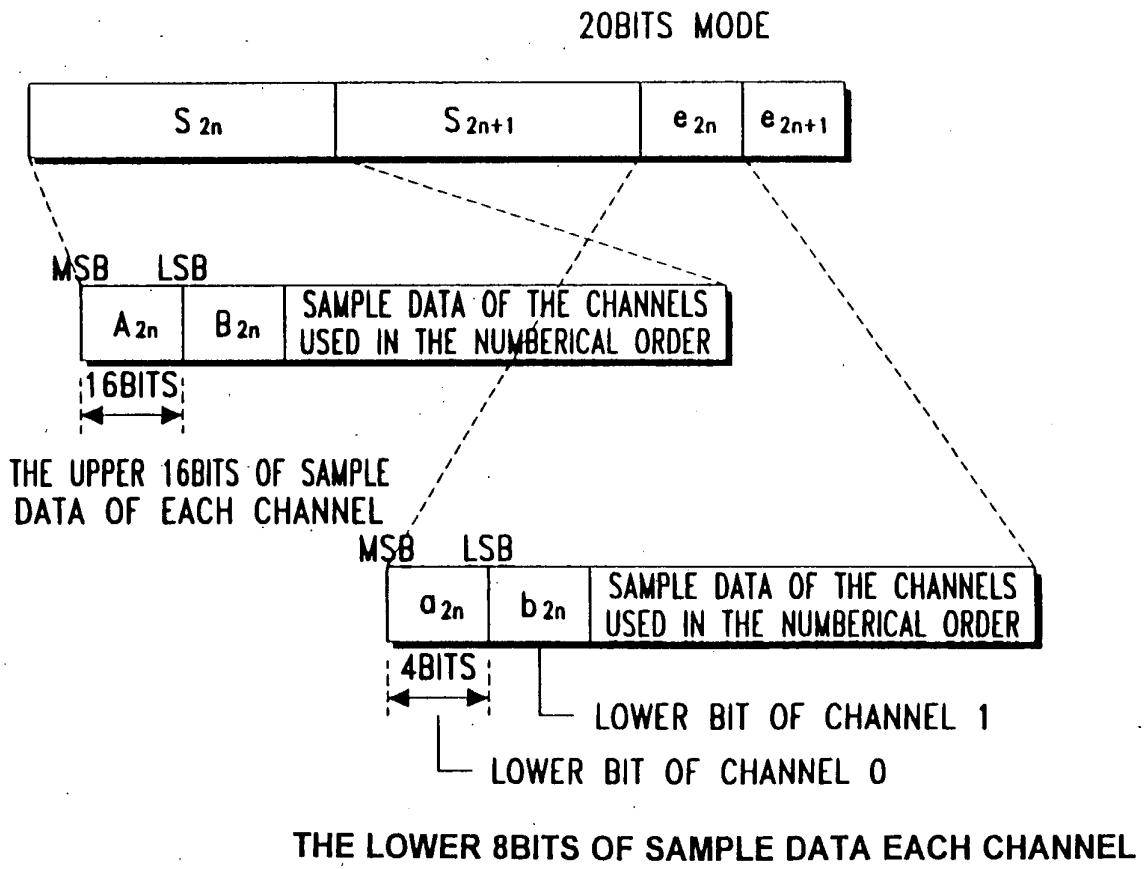
20BITS MODE
S 2n
S 2n+1
e 2n
e 2n+1
MSB LSB
A 2n
B 2n
SAMPLE DATA OF THE CHANNELS USED IN THE NUMBERICAL ORDER
16BITS
THE UPPER 16BITS OF SAMPLE DATA OF EACH CHANNEL
MSB LSB
a 2n
b 2n
SAMPLE DATA OF THE CHANNELS USED IN THE NUMBERICAL ORDER
4BITS
LOWER BIT OF CHANNEL 1
LOWER BIT OF CHANNEL 0
THE LOWER 8BITS OF SAMPLE DATA EACH CHANNEL

FIG. 24B

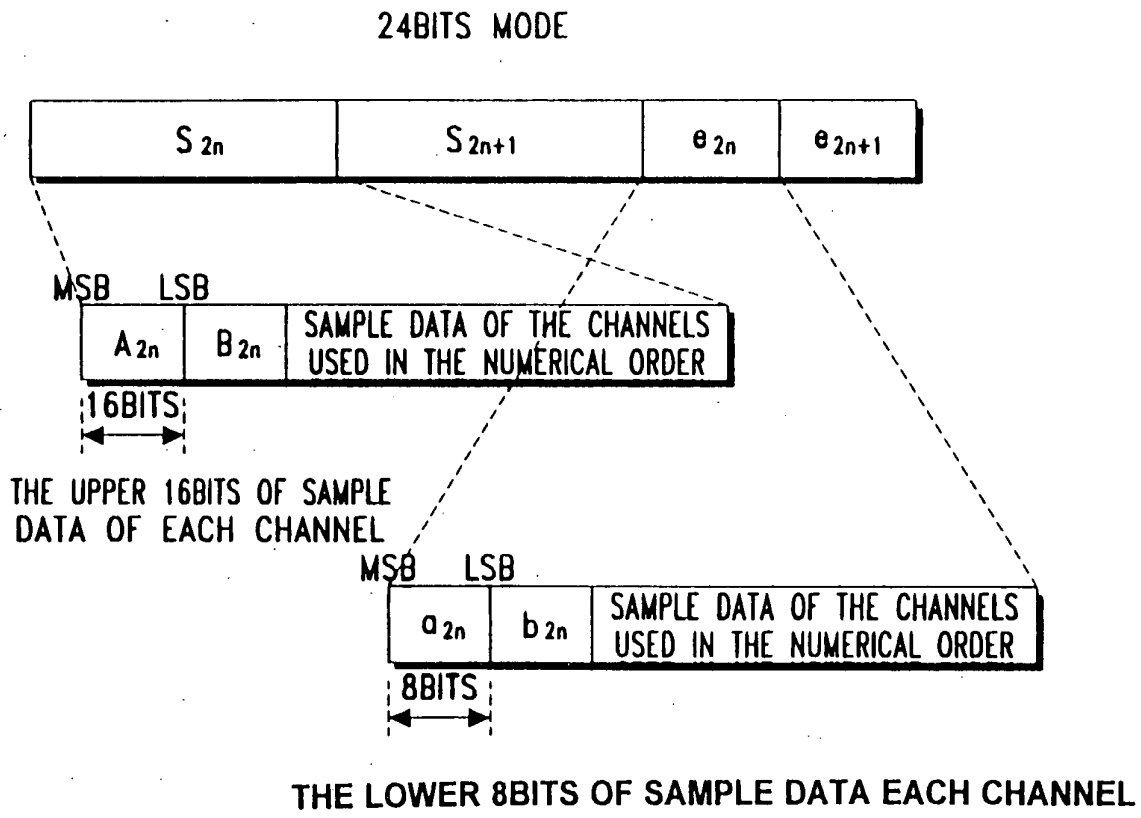
24BITS MODE
S 2n
S 2n+1
e 2n
e 2n+1
MSB LSB
A 2n
B 2n
SAMPLE DATA OF THE CHANNELS USED IN THE NUMERICAL ORDER
16BITS
THE UPPER 16BITS OF SAMPLE DATA OF EACH CHANNEL
MSB LSB
a 2n
b 2n
SAMPLE DATA OF THE CHANNELS USED IN THE NUMERICAL ORDER
8BITS
THE LOWER 8BITS OF SAMPLE DATA EACH CHANNEL

FIG. 24C

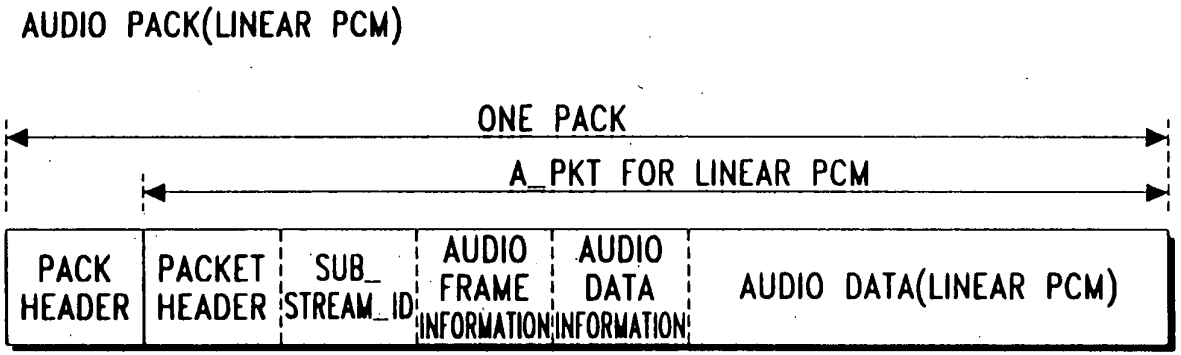
AUDIO PACK(LINEAR PCM)
ONE PACK
A_PKT FOR LINEAR PCM
PACK HEADER
PACKET HEADER
SUB_ STREAM_ID
AUDIO FRAME INFORMATION
AUDIO DATA INFORMATION
AUDIO DATA(LINEAR PCM)

FIG. 25

AUDIO PACK(CODED DATA)

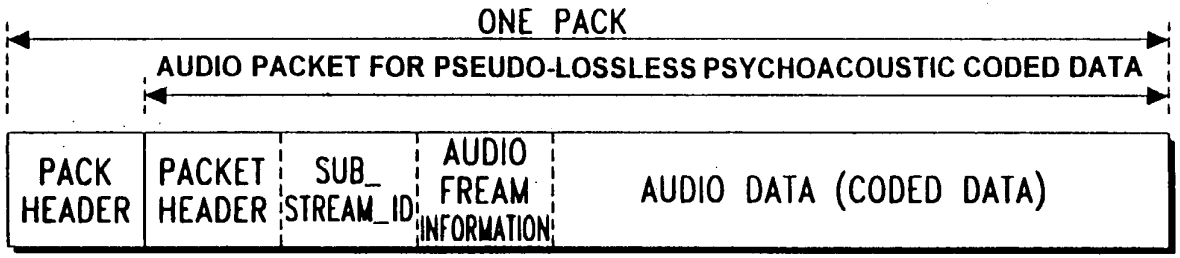

FIG. 26

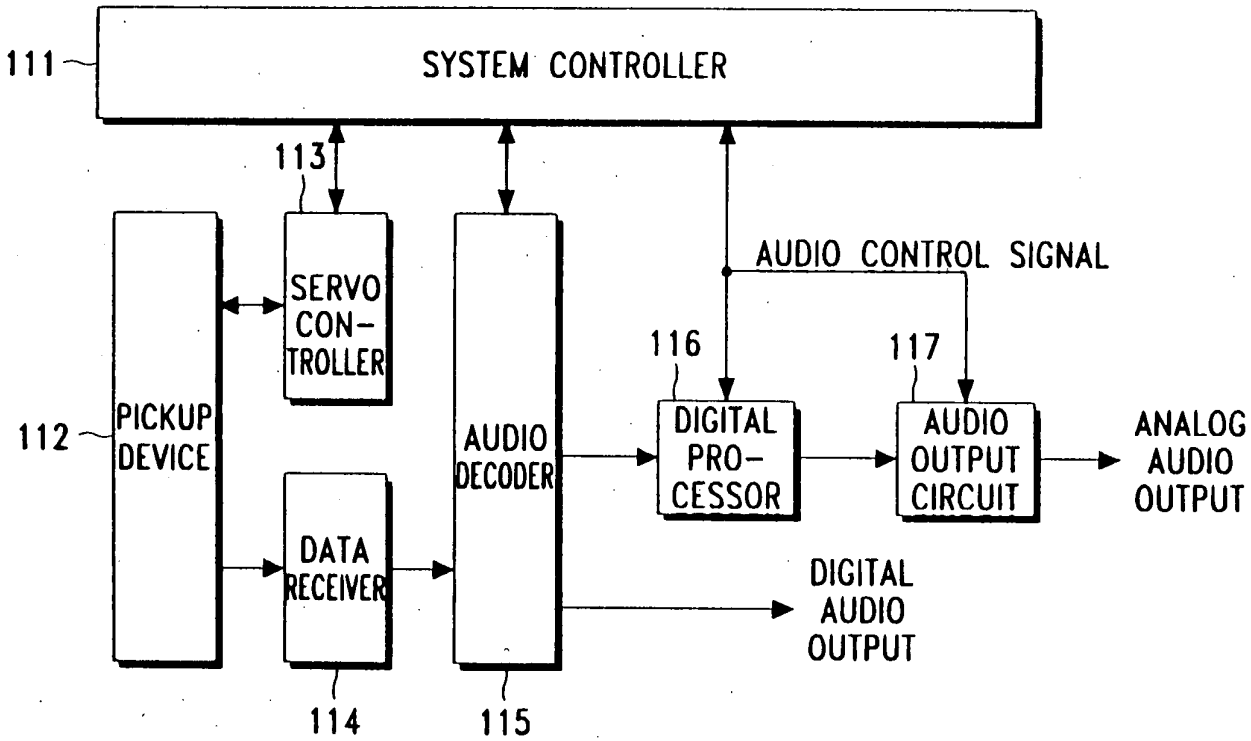
111
SYSTEM CONTROLLER
113
SERVO CON-TROLLER
112
PICKUP DEVICE
DATA RECEIVER
114
AUDIO DECODER
115
AUDIO CONTROL SIGNAL
116
DIGITAL PRO-CESSOR
117
AUDIO OUTPUT CIRCUIT
ANALOG AUDIO OUTPUT
DIGITAL AUDIO OUTPUT

FIG. 27

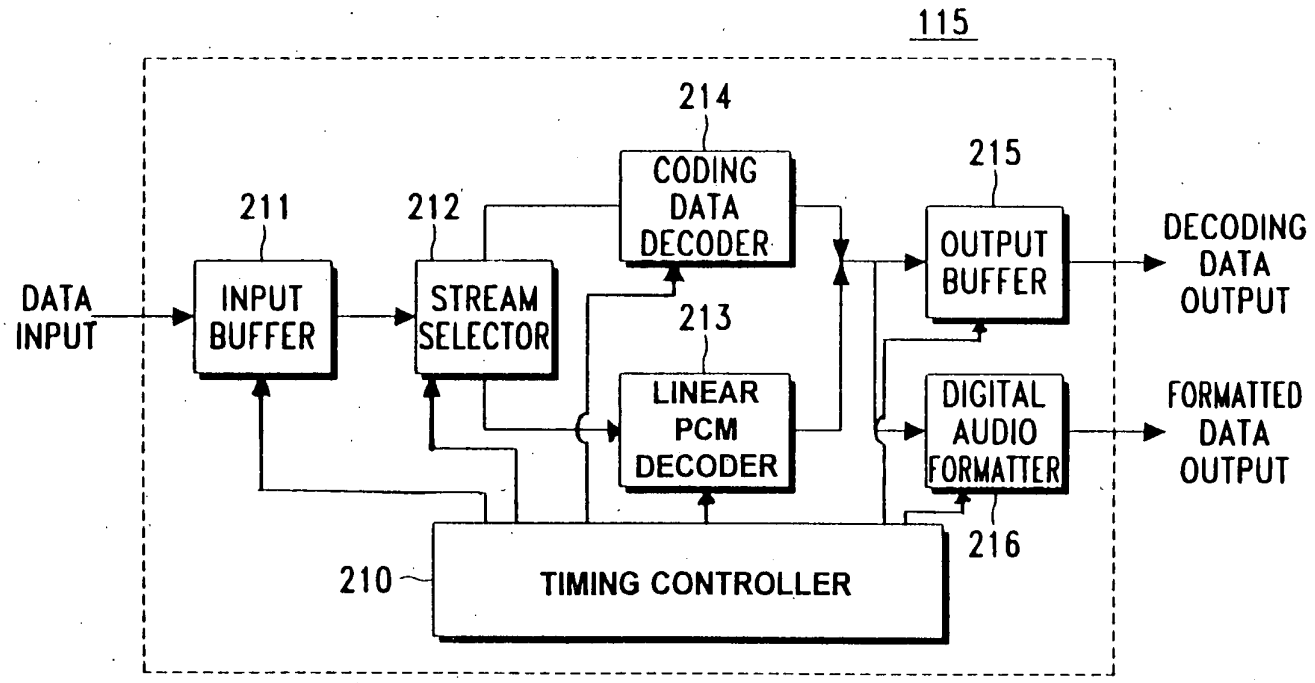
115
214
CODING DATA DECODER
215
211
212
OUTPUT BUFFER
DECODING DATA OUTPUT
DATA INPUT
INPUT BUFFER
STREAM SELECTOR
213
LINEAR PCM DECODER
DIGITAL AUDIO FORMATTER
FORMATTED DATA OUTPUT
216
210
TIMING CONTROLLER

FIG. 28

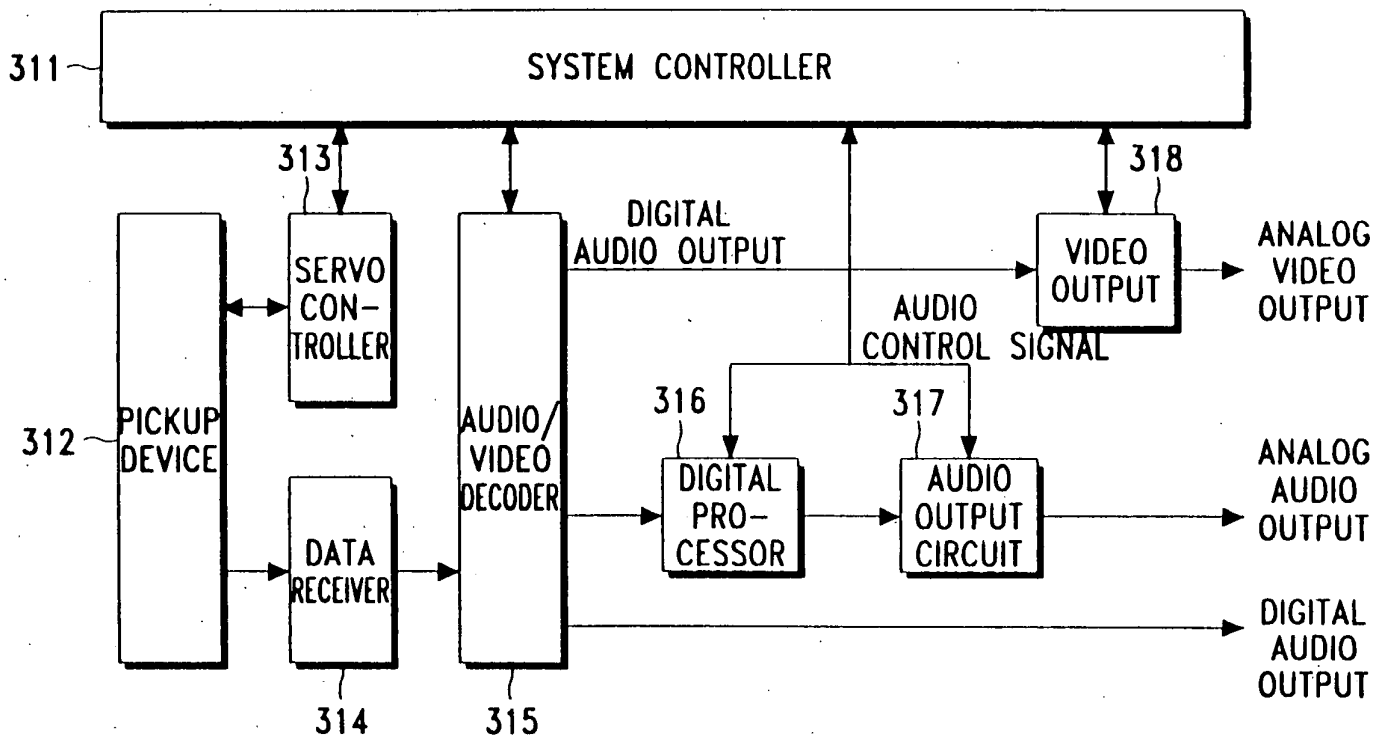
311
SYSTEM CONTROLLER
313
318
SERVO CON-TROLLER
DIGITAL AUDIO OUTPUT
VIDEO OUTPUT
ANALOG VIDEO OUTPUT
AUDIO CONTROL SIGNAL
312
PICKUP DEVICE
AUDIO/ VIDEO DECODER
316
317
DIGITAL PRO-CESSOR
AUDIO OUTPUT CIRCUIT
ANALOG AUDIO OUTPUT
DATA RECEIVER
DIGITAL AUDIO OUTPUT
314
315

FIG. 29

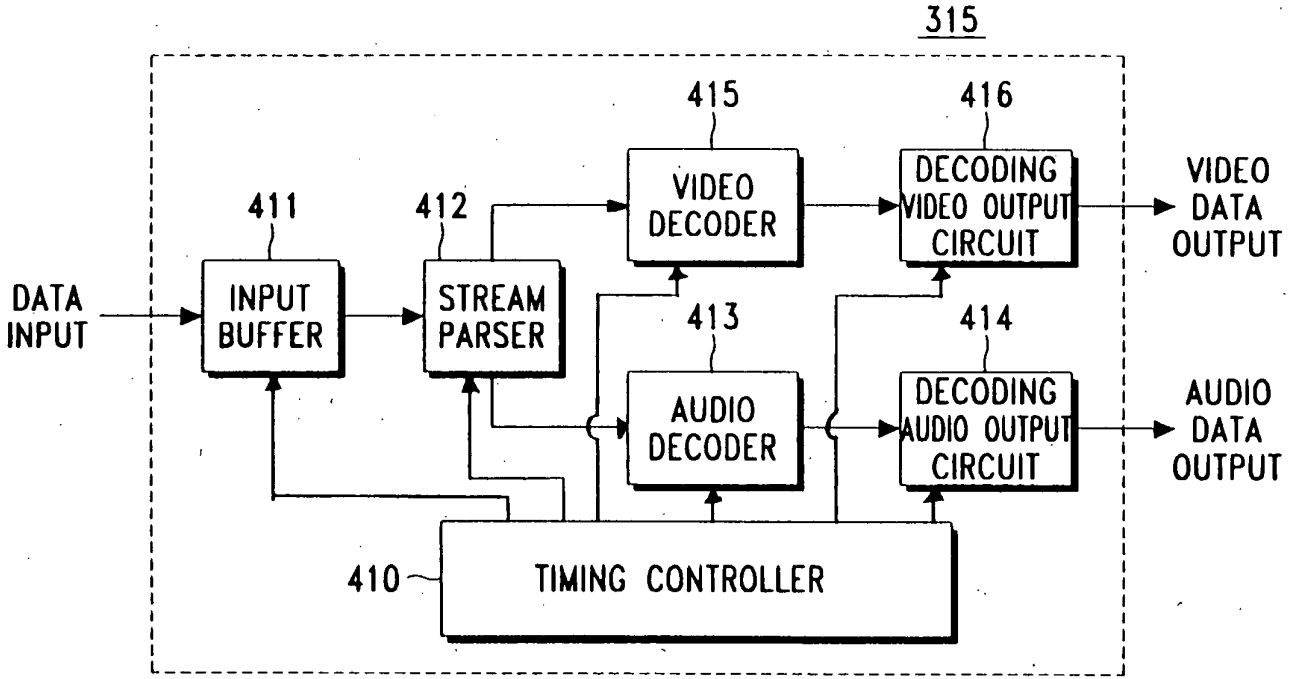
315
415
416
VIDEO DECODER
DECODING VIDEO OUTPUT CIRCUIT
VIDEO DATA OUTPUT
411
412
DATA INPUT
INPUT BUFFER
STREAM PARSER
413
414
AUDIO DECODER
DECODING AUDIO OUTPUT CIRCUIT
AUDIO DATA OUTPUT
410
TIMING CONTROLLER

FIG. 30

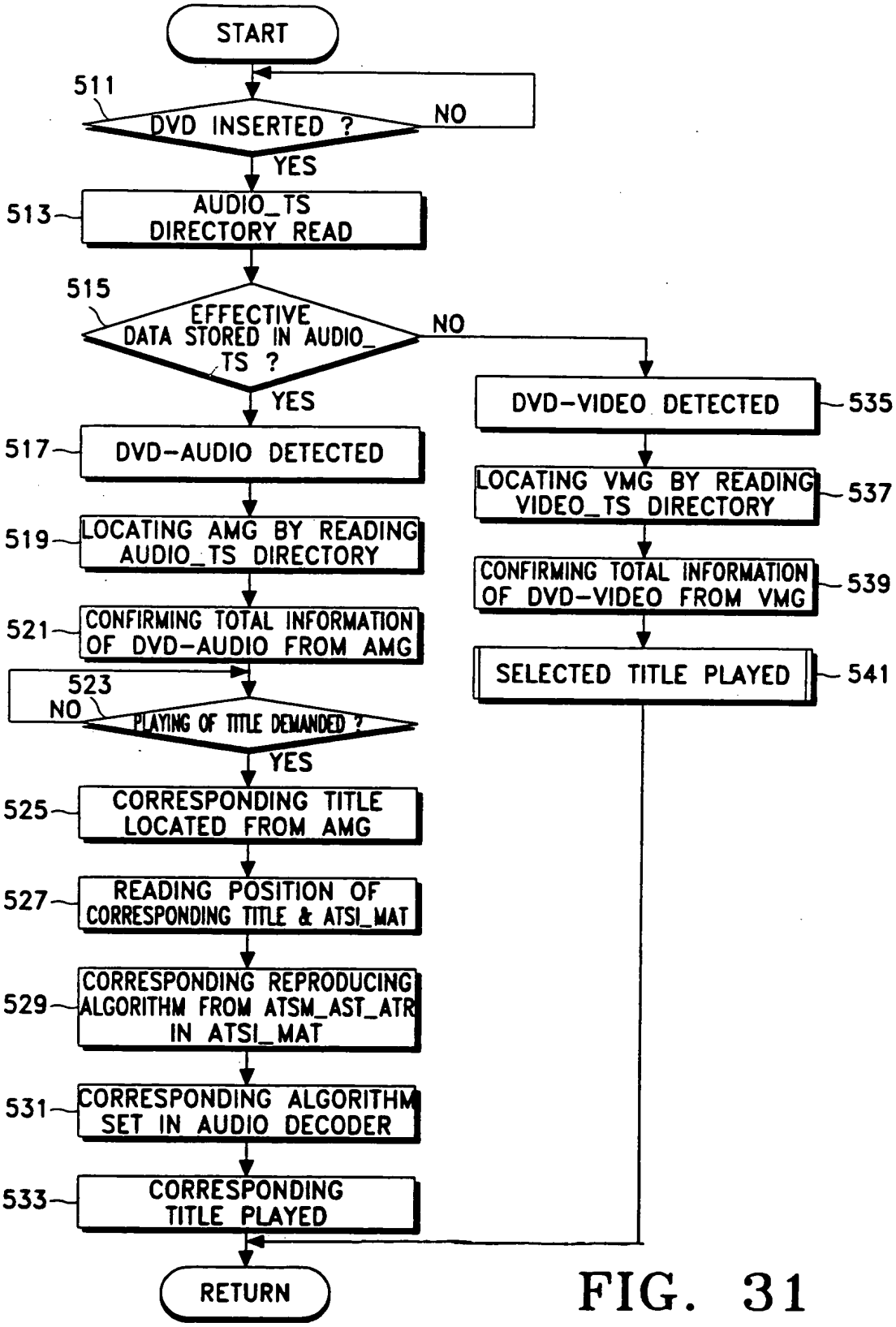
START
511
DVD INSERTED ?
NO
YES
513
AUDIO_TS DIRECTORY READ
515
EFFECTIVE DATA STORED IN AUDIO_TS ?
NO
YES
517
DVD-AUDIO DETECTED
519
LOCATING AMG BY READING AUDIO_TS DIRECTORY
521
CONFIRMING TOTAL INFORMATION OF DVD-AUDIO FROM AMG
523
NO
PLAYING OF TITLE DEMANDED ?
YES
525
CORRESPONDING TITLE LOCATED FROM AMG
527
READING POSITION OF CORRESPONDING TITLE & ATSI_MAT
529
CORRESPONDING REPRODUCING ALGORITHM FROM ATSM_AST_ATR IN ATSI_MAT
531
CORRESPONDING ALGORITHM SET IN AUDIO DECODER
533
CORRESPONDING TITLE PLAYED
RETURN
DVD-VIDEO DETECTED
535
LOCATING VMG BY READING VIDEO_TS DIRECTORY
537
CONFIRMING TOTAL INFORMATION OF DVD-VIDEO FROM VMG
539
SELECTED TITLE PLAYED
541

FIG. 31

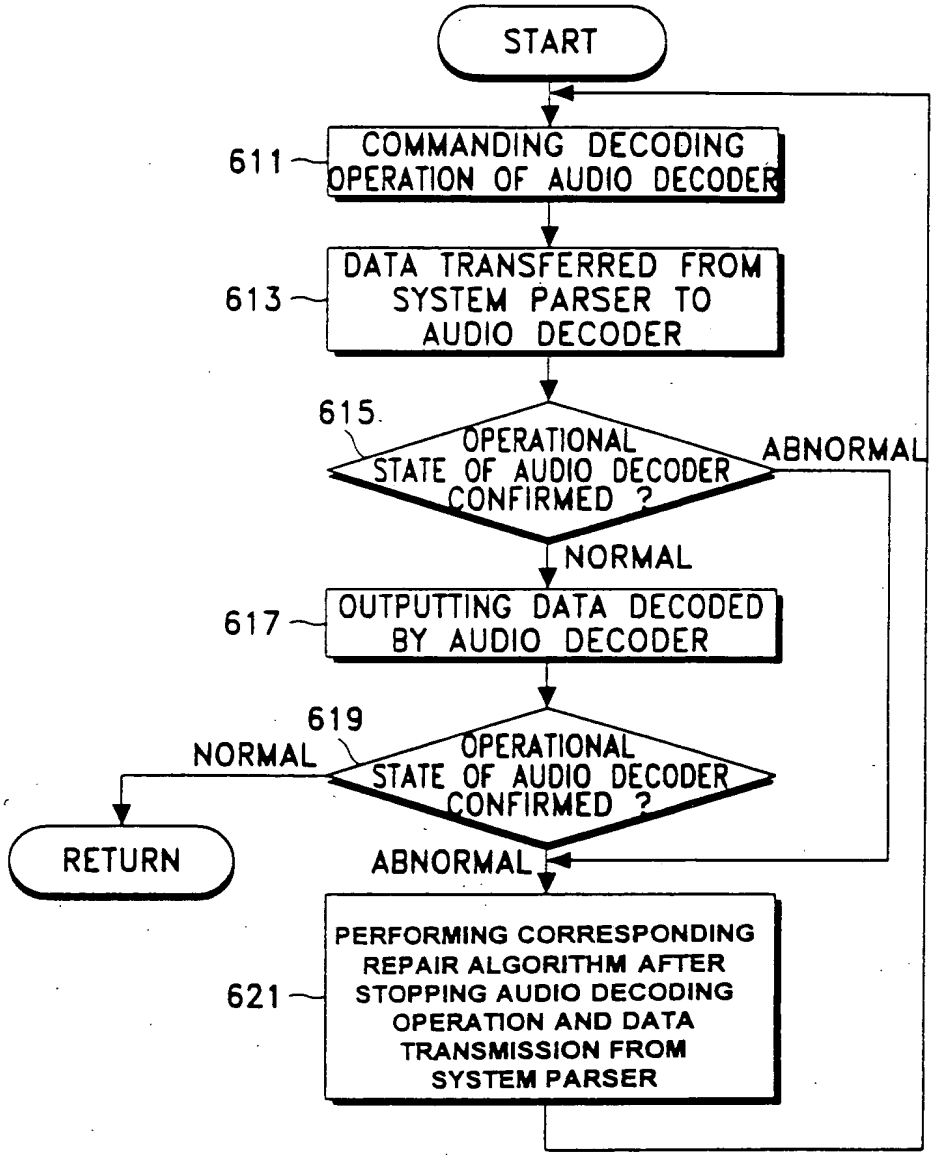
START
611
COMMANDING DECODING OPERATION OF AUDIO DECODER
613
DATA TRANSFERRED FROM SYSTEM PARSER TO AUDIO DECODER
615
OPERATIONAL STATE OF AUDIO DECODER CONFIRMED ?
ABNORMAL
NORMAL
617
OUTPUTTING DATA DECODED BY AUDIO DECODER
619
OPERATIONAL STATE OF AUDIO DECODER CONFIRMED ?
NORMAL
RETURN
ABNORMAL
621
PERFORMING CORRESPONDING REPAIR ALGORITHM AFTER STOPPING AUDIO DECODING OPERATION AND DATA TRANSMISSION FROM SYSTEM PARSER

FIG. 32